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Social Networking Nuisances

Several Aspects Of Social Networks Serve As Major Pain Points For IT

by Holly Dolezalek

IT PROBLEMS often take place at the line between the personal and the professional. Employees download a file to their work computer that has a virus in it. Salespeople put both personal and professional contacts on their BlackBerrys and then leave them in a cab. The simple answer is to forbid personal use of company assets, but the cost is the blend of personal and professional that leads to more productivity or better connections. Nowhere is that more apparent than social networking.

What looks like a pure time-waster that your employees use to avoid work can turn out to be an essential tool—for example, sales personnel are famous for mining LinkedIn for sales leads—so handling the security and productivity issues that are sometimes raised by social networking sites isn't simple at all.

“These sites are valuable for building relationships and getting contacts, and

when employees are using them for those reasons, it's not really an option to just block them,” says Mike Hrabik, CTO of Solutionary (www.solutionary.com). “On the other hand, there are many people who take advantage of these large groups



of members and who gather information to attack the members of those sites.”

Malware & Social Engineering

The technical issues with these sites are relatively well-known. Viruses abound on Facebook, for example, where hackers post links for unsuspecting users to click. Those links often lead to a fake site where the user is prompted to give personal information or simply give that user a virus that then propagates itself through his entire contact list. “When a computer inside your network gets compromised, the attacker can access all data on that system as well as all the data and systems that computer or any users of that computer have access to,” says Kevin Prince, CTO of Perimeter E-Security (www.perimeterusa.com). “This

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Energy Options

Alternative Power Sources For The Data Center

by Elizabeth Millard

WITH ENERGY CONSUMPTION on the rise—and expected to keep growing—data center managers are continually on the lookout for ways to increase efficiency and cut down on power and cooling costs. Although alternative energy strategies such as solar and wind aren't widespread yet, the move toward green technology could boost adoption rates in the coming years.

“Basically, anything that can offset the use of commercial power and its associated costs is being looked at,” notes Kris Domich, principal consultant at Dimension Data (www.dimensiondata.com). “As a benefit to moving in that direction, we're likely to see cleaner, greener data centers. The cost to get there might be too high for most data

Key Points

- The ever-increasing demand for power is likely to drive more research into alternative energies, and subsequently, lead adoption for these energies in data centers.
- Compelling research is being done that could help boost the efficiency of other alternative energy forms, such as wind.
- The cost to implement alternative energy sources is fairly high for smaller data centers right now, but experts expect the costs to come down as the demand rises.

centers right now, but it's likely to come down as the interest keeps growing.”

Research Initiatives

The alternative energy field certainly brims with possibilities when it comes to research, development, and partnerships. Early this year, for instance, Lawrence Livermore National Laboratory signed an agreement with Siemens Energy (www.siemens.com) to provide high-resolution atmospheric modeling capabilities, a strategy that can improve the efficiency of wind farm operations.

The laboratory's modeling will allow for better weather forecasting, which is vital for boosting wind performance, according to Julie Lundquist, a Livermore scientist who heads the project. She notes that the methods they've developed for simulating turbulent properties of the lower atmosphere will result in a predictive advantage for wind energy farms.

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Microsoft To Pursue Click Launderers

Software giant Microsoft has launched an attack against click laundering, a term used to describe the practice of artificially adding clicks to Web site ads. The company has filed lawsuits against two companies it believes have engaged in this practice, RedOrbit and HelloMetro. Microsoft alleges that rather than using the traditional method of directing traffic to ads via botnets and parked sites, RedOrbit used a new and more sophisticated practice of directing the traffic to its own servers, removing identifying information, and replacing the code with information that made it look like the hits came directly to the site in question. Microsoft claims to have installed technology to combat future occurrences of this type of click laundering and hopes that its lawsuits will also serve to thwart others from engaging in the practice.

Gartner Predicts Effects Of Server Market Climb

Despite decreased revenue and volume in the server market in 2009, Gartner predicts the market will turn around in 2010 and escalate problems IT personnel are already facing. Data center power, cooling, and space have always been challenges for organizations, but Gartner says that if the market rebounds as predicted, IT personnel will need to have plans in place to manage the problem. Gartner suggests starting by accurately measuring the problem and then integrating energy-monitoring tools. IT professionals can also hasten consolidation and virtualization projects or delay plans to implement new servers until space, power, and cooling can be sufficiently provided.

IBM Global CEO Study Shows Uncertainty

Less than half of the CEOs interviewed by IBM feel their organizations are equipped to handle a business environment that is growing more volatile and complex by the day. Through in-person interviews, IBM surveyed more than 1,500 CEOs from 60 countries and 33 industries around the world. About 80% of respondents expect their business environments to continue to increase in complexity, and about 87% say the expected increase in government intervention and regulation is adding to their uncertainty. Creativity in regard to administering structure, finances, people, and strategy was cited as the best way to navigate through the complex business environments.

Global IT Companies Unite As UCIF

HP, Juniper, Microsoft, Logitech/LifeSize Communications, and Polycom are among the global tech companies that have come together to establish the UCIF (Unified Communications Interoperability Forum). The nonprofit organization will create true open standards for unified communications, including UC environment migration, mission-critical application deployment, and federation between vendors, which can be applied to selecting UC technology components and services. Other committed companies include Broadcom, Brocade, ClearOne, Jabra, Plantronics, and Siemens, to name a few; additionally, Avaya, Skype, and Cisco have also received invitations to join the UCIF. The organization hopes to streamline the communication technologies for end users and the corporate facilitation of interoperability testing.

Study: Google Pac-Man Game Cost Money & Man-Hours

According to a study conducted by RescueTime, Google's free Pac-Man game cost companies 4.8 million hours of work time and about \$120.5 million. Google posted the Pac-Man app as its home page logo; users were able to play the game each time they accessed the ubiquitous search engine. RescueTime says an average employee spends four and a half minutes

searching Google over the course of a day, comprising 22 page views. Google posted the game on its home page in honor of the video game's 30th anniversary; overall, it drew 504 million unique views.

FTC Investigates Copy Machine Privacy Threats

The Federal Trade Commission announced recently that it will begin contacting copy machine resellers, manufacturers, and office supply stores regarding potential privacy risks that copy machines could pose. The risks stem from the fact that many copy machines store digital copies of scanned items on their hard drives. A CBS report was able to find sensitive information on copy machine hard drives, including health records and law enforcement investigation information that individuals had copied. The FTC is currently working to educate those who handle and use copy machines about hard drives and privacy issues.

Oracle To Buy Secerno

Oracle announced that it plans to buy Secerno, a manufacturer of firewall products designed for databases. Secerno makes various hardware and software products under its DataWall series, all of which work to block unauthorized access to databases. Oracle will benefit from Secerno's technology because there is a rising demand for data protection products, Oracle says. Once the deal is complete, Oracle plans to honor Secerno partner agreements to ensure a smooth transition. Financial details of the agreement were not disclosed for the deal, which is expected to close at the end of this month.

P2P Networks Leak Healthcare Data

A Dartmouth College study has determined that healthcare data is freely available on many P2P (peer-to-peer) networks, such as LimeWire, eDonkey, and BearShare. Data discovered on those networks includes spreadsheets containing insurance details, personally identifying information, physician names, and diagnosis codes on more than 28,000 patients. A similar document contained information on another 7,000 patients. Many documents also included treatment data and psychiatric evaluations. Although some of the documents appear to be older, many are recent enough to have been leaked subsequent to the passage of the Obama administration's HITECH (Health Information Technology for Economic and Clinical Health) Act.

IBM Acquires AT&T Business Unit

IBM has agreed to buy AT&T's Sterling Commerce unit, a division that publishes software aimed at helping businesses buy and sell to one another. Sterling has 18,000 clients worldwide, including H.J. Heinz and Motorola, and plays a part in about 1 billion deals every year. The B2B company's annual revenues were not disclosed. AT&T paid some \$3.9 billion for Sterling in 2000; IBM is expected to pay about \$1.4 billion for the unit. An AT&T spokesperson justified the sale, noting that Sterling was "no longer core" to the parent company's long-term objectives. The deal is expected to close sometime in the second half of the year.

Media Tablets Poised For Growth

Industry analysts at IDC expect shipments of media tablets (devices defined as having touch-sensitive screens, lacking keyboards, and running a light OS) to grow dramatically through 2014. In IDC's "Worldwide and U.S. Media Tablet 2010-2014 Forecast," the firm claims that more than 46 million of the devices, including Apple's iPad, will ship in 2014. For 2010, IDC only expects 7.6 million of the devices to ship. Between now and 2014, tablets

will experience a healthy compound annual growth rate of 57.4%, largely driven by third-party applications. Another analyst, DisplaySearch, revealed that 606 million touchscreens shipped last year. DisplaySearch's 2010 Touch Panel Market Analysis report indicates that touchscreen shipments (used in devices such as mobile phones, MP3 players, and GPS devices) jumped 29% for the year compared to 2008. Last year, more than half (376 million) of all touchscreens shipped went into cell phones.

Mobile Phones Had A Good Quarter

According to Gartner, 314.7 million mobile phones and smartphones sold worldwide in the first quarter of 2010, representing a 17% increase compared to the same period in 2009. Smartphones did particularly well, as sales improved 48.7% to 54.3 million units sold, largely thanks to high demands and lower prices. At the time of the report, Nokia maintained a 35% worldwide market share, followed by Samsung, LG, Research In Motion, and Sony Ericsson, at 20.6%, 8.6%, 3.4%, and 3.1%, respectively. In Q1 2010, smartphones sold better year-over-year than they have since 2006.

Symantec To Acquire VeriSign's Identity & Authentication Business

Symantec has agreed to pay VeriSign \$1.28 billion in cash to acquire the company's identity and authentication business. Specifically, Symantec is buying VeriSign's Secure Sockets Layer Certificate Services, Public Key Infrastructure Services, VeriSign Trust Services, and the VeriSign Identity Protection Authentication Service. Symantec says the acquisition, which should be completed during the September quarter, will help the company improve its identity security products for both businesses and individuals during a time when security threats continue to evolve. Incorporating VeriSign's identity and authentication business will also help Symantec focus on identity security, mobile and other device security, information protection, context and relevance, and cloud security, the company says.

Dell Shows Positive Growth

Dell reported total revenue of \$14.9 billion for the quarter that ended April 30, up 21% from a year ago, and a non-GAAP income of \$824 million, up 29% over the same time period. Dell's servers, storage, and services contributed \$4.2 billion in revenue. The company reported strong results in each of its business units. Large Enterprise revenues were up 25%, with a 61% increase in server revenue and a 44% increase in services revenue. Revenue from the Public business unit was up 22%, Small and Medium Business was up 19%, and Consumer revenue was up 16%.

EU Fines Chipmakers For Price Fixing

The European Commission fined nine semiconductor manufacturers more than \$404 million after the companies admitted to illegally fixing prices for DRAM memory chips. The companies received a 10% reduction in their fines for acknowledging their participation in a cartel. The commission says the cartel, which included Samsung, Infineon, Hynix Semiconductor, Elpida Memory, NEC Electronics, Hitachi, Toshiba, Mitsubishi Electronics, and Nanya Technology, operated between 1998 and 2002. The companies shared secret information that allowed them to coordinate prices for DRAM chips sold to computer manufacturers such as HP and Dell.

Upcoming IT Events

Are you looking to learn more about data center or IT topics? Network with some of your peers? Consider joining a group of data center professionals. If you have an event you'd like listed, please send an email to feedback@processor.com.

- JUNE -

[7x24 Exchange Spring Conference](#)

June 6-9

Boca Raton Resort and Club
Boca Raton, Fla.

www.7x24exchange.org/spring10/index.htm

[AITP Garden State](#)

June 8

Jim Johnston's Steakhouse
58 Eisenhower Parkway Mountain Plaza
Roseland, N.J.
tech.groups.yahoo.com/group/aitpgardenstatechapter

[AITP Richmond](#)

June 8

2015 Staples Mill Road
Richmond, Va.
www.aitprich.org

[PASS Wisconsin](#)

[SQL Server User's Group](#)

June 8, 4:30

Microsoft Office
2176 Woodcrest Drive
Green Bay, Wis.
wisconsin.sqlpass.org

[VMware Vsphere: Troubleshooting](#)

June 8, 9 a.m.

Platform Labs
1275 Kinnear Road
Columbus, Ohio
www.platformlab.org

[AITP San Diego](#)

June 9, 5:30 p.m.

National University-Kearny Mesa Campus
3678 Aero Court
San Diego, Calif.
sandiego.aitp.org

[Greater Wheeling AITP](#)

June 9

Wheeling, W.Va.
www.aitp-wheeling.org

[ISSA Parsippany](#)

June 9

Deloitte Services
100 Kimball Drive
Parsippany, N.J.
nj.issa.org

[ISSA San Diego](#)

June 9

San Diego, Calif.
www.sdisa.org

[Southern New England SQL Server User's Group](#)

June 9

www.snessug.com

[AITP Washington D.C.](#)

June 10, 6:30 p.m.

Alfio's Restaurant
4515 Willard Ave.
Chevy Chase, Md.
aitpwashdc.ning.com

[ISSA Northeast Ohio](#)

June 10

Cuyahoga County Library-Parma South
7335 Ridge Road
Parma, Ohio
www.neoissa.org

[SQL Server Society of Las Vegas](#)

June 10

The Learning Center of Las Vegas
777 North Rainbow
Las Vegas, Nev.
ssolv.com

[AITP Pittsburgh](#)

June 14

Slovak Catholic Sokol
205 Madison St. Road
Venetia, Pa.
www.aitp-pgh.org
AITP's Association Outstanding Chapter Award Winner

For more Upcoming IT Events, see page 10.

PRODUCT RELEASES

The *Processor* Product Releases section includes brief overviews of data center products.

All products listed have been released recently, so use this section to get up-to-date with what's new on the market and to find products you need.

Manufacturers:
Do you have a new product that data center/IT managers would be interested in learning about?
Send your press release or product information to press@processor.com.

CLIENTS

■ Clerity UniKix Mainframe Rehosting Software

Clerity is a full-service provider of mainframe migration, modernization, and optimization solutions. Drawing from more than 16 years of experience and a track record of success at more than 1,300 sites worldwide, Clerity's robust mainframe rehosting software and migration technologies protect and extend investments in business logic, data, and procedures.



UniKix mainframe rehosting software from Clerity provides a mission-critical environment for deploying IBM® CICS® applications, IBM® IMS® transactions, COBOL programs, Batch/JCL, and other legacy assets onto open systems. By rehosting applications off the mainframe, IT flexibility is enhanced and service levels are protected, improving time to market and dramatically reducing TCO. For more on this product, see page 37.

■ HyperOffice Collaboration Suite

HyperOffice released a version of its cloud computing messaging and collaboration suite for small and medium-sized enterprises. The company says the suite provides entrepreneurs with software tools and support services to launch new ventures from any Web-enabled computer, smartphone, or mobile device. It also gives SMEs expansion abilities and features Ajax and various Web 2.0 technologies that improve performance, scalability, and security.

■ Motion Computing F5v Mobile Field Tool & C5v Mobile Clinical Assistant

Motion Computing announced the release of its F5v Mobile Field Tool and C5v Mobile Clinical Assistant, the first slate tablets to run on Intel Core vPro processors. The devices are built to be lightweight but rugged—both tablets meet MIL-STD-810G and IP-54 standards. The machines are aimed at mobile professionals across vertical industries such as health care, construction, and field service. They run either Windows 7 or Windows XP, so they can integrate seamlessly into an enterprise and run the same applications and utilities as office-based employees, thus reducing the load on IT personnel and infrastructure.

■ Quest Software Microsoft SharePoint Server 2010 Solutions

Quest Software announced a suite of Microsoft SharePoint Server 2010-ready tools designed to make preparing, migrating, managing, and customizing SharePoint Server 2010 easy. Features include detailed premigration assessments to help customers simplify their migrations, plan their target environments, and save time and money.

■ SAP NetWeaver CE 7.2

SAP released a new version of the SAP NetWeaver Composition Environment offering, the SAP NetWeaver CE 7.2. It lets customers add to existing IT installations, coordinate new business processes, and obtain increased visibility

throughout the company to help personnel make impactful decisions for the enterprise.

■ Servoy 5.2

Servoy has released an open-source version of its Servoy 5.2 SaaS platform, which Servoy says supports “SaaS and Back” hybrid applications deployable via cloud computing and onsite via browser and native client interfaces. Under the AGPL license, the source code for Servoy Developer, Servoy Smart Client, and Servoy Web Client will become open-source in version 5.2.

■ Themis Computer Mission & Payload Systems Initiative

Themis Computer announced its MPSI (Mission and Payload Systems Initiative), which is designed to provide integrated system solutions and value-added services to Themis military and aerospace customers. The MPSI target applications include UAV sensor processors, data processing and recording units, mission computers, display processors, and EW/SIGINT suite controllers.

■ Wyse Technology Support For Windows Embedded Standard 7

Wyse Technology supports Microsoft's Windows Embedded Standard 7 to deliver Windows 7 in a customizable and componentized form for a family of Wyse thin clients. Windows Embedded Standard 7 also includes Windows Aero and RDP (Remote Desktop Protocol) 7.0 to provide connectivity to Windows Server 2008 R2 and virtual desktop infrastructure scenarios.

NETWORKING & VPN

■ Acme Packet Net-Net 3820 Session Border Controller

Acme Packet released the Net-Net 3820 session border controller for small and mid-sized IP communications service providers. The NEBS-compliant platform supports up to 8,000 sessions and can be configured as a Net-Net Session Director or Net-Net Signaling Firewall. It can also be used as a session routing proxy.

■ Citrix Systems Citrix Cloud Solution

Citrix Systems released a portfolio of solutions aimed at allowing cloud providers to deliver business services. The portfolio includes the Citrix Cloud Compliance Solution, which protects sensitive data in private and public clouds, and is based on an open framework that allows cloud providers to add their own innovations to each solution.

■ Citrix XenClient

Citrix announced the public release of Citrix XenClient. The client-side virtualization solution lets centrally managed virtual desktops operate on corporate computers, regardless of whether they are connected to the network. Citrix XenClient, which was developed in collaboration with Intel, has Intel vPro hardware virtualization technologies built into its bare metal architecture.

■ Citrix XenServer 5.6

Citrix introduced Citrix XenServer 5.6. The release offers centralized multinode management, multiserver resource sharing, and full live migration. Additionally, it offers enterprise enhancements

designed to expand host memory, CPU, network, and operating system support. A free edition of XenServer 5.6 is available as well as XenServer 5.6 Advanced, XenServer 5.6 Enterprise, and XenServer 5.6 Platinum.

■ Codima Toolbox All In One

Codima's Toolbox All In One delivers a set of effective network management tools geared toward managing the total network. The tools are available in an All In One Toolbox bundle or in separate toolboxes: Codima IT Inventory & Mapping Toolbox, Codima IT Engineer Toolbox, Codima VoIP Readiness Toolbox, and Codima VoIP Monitoring & Troubleshooting Toolbox.

■ Firetide Wireless Bridge 100

Firetide announced its Wireless Bridge 100 family of outdoor wireless Ethernet bridges, which are software configurable for 2.4GHz, 5GHz, and 4.9GHz and capable of up to 35Mbps of throughput. The FWB-102 features two FWB-100 nodes and built-in 2.4GHz antennas; the FWB-105 includes 4.9GHz and 5GHz external antennas. Both start at less than \$1,000 and \$1,500, respectively.

■ InMage Cloud-Optimized Infrastructure

InMage announced cloud-optimized infrastructure solutions that leverage “cloudbursting” for cloud providers wanting to expand their service offerings. The cloud-optimized infrastructure makes transferring application services and data into and out of the cloud automatic. InMage's cloudbursting technology addresses disaster recovery, administration, and production offloads.

■ Linxter MonitorGrid

Linxter released MonitorGrid, a service that monitors performance, storage, and network activity of Microsoft servers no matter their network or domain. MonitorGrid runs on Azure and offers secure two-way communication between servers and the service's interface. The service also supports on-demand and scheduled remote restarts, multiple users, and transferring files from one to numerous servers.

■ ManageEngine NetFlow Analyzer 8

ManageEngine released NetFlow Analyzer 8, its Web-based traffic analysis and network forensics application. NetFlow Analyzer 8 can now monitor VoIP using IPSLA to keep track of VoIP performance metrics. It also includes support of SNMP v3 and the ability to inspect NBAR (Network Based Application Recognition) traffic generated by Flexible NetFlow.

■ Perle 10/100/1000 Ethernet-To-Fiber Media Converters

Perle announced a new line of 10/100/1000 Ethernet-to-fiber media converters. The media converters allow users to add the benefits of fiber to their copper-based UTP network, Perle says. The media converters have an onboard microcontroller that handles error detection and recovery.

■ Uptime Software up.time 5

Uptime Software released version 5 of its up.time tool for monitoring enterprise infrastructure and applications. up.time 5 adds more than 20 deep VMware metrics,

including Memory Balloon, Percent Wait, and Memory Zero to help you avoid instance contention. To stop overprovisioning, up.time 5 can report on the total VMs and rates of growth over time, and it



UPTIME SOFTWARE

can do so over a global or data center level. The addition of Watch Instances VMotion lets you monitor instances as they move automatically from platform to platform. Version 5 also offers live dashboards and reports across multiple data centers and platforms. For more on this product, see page 7.

■ Wyse Technology Wyse Zero

Wyse Technology released the Wyse Zero engine, which is software that helps to simplify the development of cloud-connected devices. Wyse Zero connects users to cloud computing services and virtual desktops with efficient communications and protocol technology. The Wyse Zero engine powers all devices that utilize the Wyse ThinOS, implementations of Wyse PocketCloud, and Wyse Xenith devices.

PHYSICAL INFRASTRUCTURE

■ Chloride MOD10 Series

Chloride announced its MOD10 Series, a three-phase UPS system. The MOD10 features a scalable rack-mounted design, and users can add up to 50kVA or 100kVA 2U-sized modules, depending on the frame size chosen. The MOD10 can be installed without shutting down the system. The MOD10 UPS system comes with built-in SNMP/Web/network connectivity for remote access.

■ Server Technology & Modius OpenData

Server Technology announced a comprehensive integration of SPM (Sentry Power Manager), Sentry Smart, and Switched Power Distribution Units with Modius OpenData for centralized data center monitoring and analysis. These products, along with Server Technology's SPM v4.2 appliance, are integrated with Modius' OpenData 3.2 system using Server Technology's API.

■ Wright Line Rack Hygiene

Wright Line announced Rack Hygiene, a classification for data center energy management that will describe the care in which the data center rack envelope is designed, controlled, and maintained. The Rack Hygiene concept encompasses the identification, analysis, and repair of hot air leakage areas/infusion paths and cold air bypass routes within and around individual data center racks.

SECURITY

■ CipherOptics CipherEngine Enforcement Point

The CipherEngine Enforcement Point group encryption appliances from CipherOptics have been FIPS (Federal

PRODUCT RELEASES

Information Processing Standard) 140-2 certified. The company says the Cipher-Engine Enforcement Point appliances are the first FIPS 140-2-certified products that offer multilayer IPsec VPN capabilities in a single appliance.

■ Cyberoam Version X

Cyberoam announced the release of its new firmware, Version X, designed to strengthen existing Cyberoam UTM and remove the clutter found in some UTM appliances. The firmware’s features include ESA (Extensible Security Architecture), Application Layer 7 Management, 3G/WWAN connectivity, security for HTTPS/SSL traffic, IPv6 support, and a new user interface.

■ Fortinet FortiGate-3950B & FortiGate-3951B Appliances

Fortinet launched the FortiGate-3950B and FortiGate-3951B multithreat security appliances that consist of a firewall, an intrusion prevention system, and advanced application-based security protection. Features include the FortiOS 4.0 MR2 operating system, FortiASIC processors, and a modular architecture. Ideally suited to large enterprises, the new FortiGate appliances will be available by the end of the quarter.

■ GFI Software MailEssentials 2010

GFI Software announced the latest version of its antispam software, Mail-Essentials 2010. MailEssentials 2010 uses two antispam filters to reach a capture rate of 99%, GFI says. New features include the ability to quarantine spam emails in a database and have them automatically deleted. MailEssentials 2010 also has dashboard entries that can be filtered by sender, recipient, subject, or message ID; an antispam filter and whitelist log files that can be rotated based on size or time; and an improved detection method of email disclaimers to avoid disclaimer repeats.

■ Imperva SecureSphere Virtual Appliances

Imperva announced its SecureSphere Virtual Appliances, which are designed to offer the same features as its hardware-based products, including best-of-class security protection, compliance and risk management, flexibility, speedy deployment, and the ability to easily provision and configure security services. The virtual appliances are able to satisfy the security needs of dynamic and virtualized enterprise environments and offer Web application and database firewalls and database activity monitoring. They can be installed on any hardware running VMware ESX. Other features include enhanced inspection and protection of Web and database servers and support for VMware VMotion.

■ Juniper Networks AppTrack, AppSecure & Junos Space Security Design

Juniper Networks released data center security products designed to reduce cost and difficulty and increase application visibility in the enterprise. The products include Juniper Networks AppTrack

software, AppSecure software, and Junos Space Security Design software; they are engineered to work with the SRX Series Services Gateways. Juniper Networks also released an OEM version of the Juniper SRX series via IBM and joined with FireEye to provide malware protection. These products let Juniper customers distribute security resources to secure the changing traffic flows scaled over 120Gbps using just one platform.

■ nCircle Perimeter Profiler

nCircle announced the nCircle Perimeter Profiler, a cloud-based virtualized appliance that enables organizations to assess their Internet-facing assets from an external perspective. Perimeter Profiler extends the reach of nCircle IP360 to include external assets and their related network, operating system, and Web application vulnerabilities. Because it is fully integrated, customers get a consolidated view of their entire network using the same objective metrics to measure their external security as they use with their internal security. The IP360 suite provides you with a 360-degree view of your Internet-facing assets.

■ StillSecure ProtectPoint Log Management

StillSecure announced ProtectPoint Log Management service, which consolidates and organizes log events from network systems, providing detailed visibility into the network to ensure that critical events are investigated and, if necessary, remediated. The service prevents breaches by locking down systems and bringing them into compliance with regulatory requirements, providing real-time regulatory reporting.

■ Wright Line Rack Hygiene

Wright Line announced Rack Hygiene, a classification for data center energy management that will describe the care with which the data center rack envelope is designed, controlled, and maintained. The Rack Hygiene concept encompasses the identification, analysis, and repair of hot air leakage areas/infusion paths and cold air bypass routes within and around individual data center racks.

■ Symantec Hosted Endpoint Protection

Symantec announced a cloud solution called Symantec Hosted Endpoint Protection. Designed for small to medium-sized enterprises looking for additional computer system security without additional hardware or software, Symantec Hosted Endpoint Protection gives users the ability to protect their Windows-based laptops, desktops, and file servers from threats.

SERVERS

■ Oracle Sun Netra 6000

Oracle introduced the Sun Netra 6000 carrier-grade server ideally suited to the demands of media services delivery and operations and business support systems in the communications industry. The server features advanced blade networking, simplified management, Network Equipment Building System certification, and extended lifecycle support.

STORAGE

■ Adaptec MaxIQ SSD Caching Portfolio

Adaptec announced that it is expanding its portfolio of MaxIQ SSD Caching products with three new storage controllers, a MaxIQ 64GB Cache Performance kit, wider support for SSDs, and advanced management and analytics tools. Each Adaptec MaxIQ storage controller features

1.2GHz of processing power and 512MB of DDR2 write cache.

■ Caringo CASTor 4.0

Caringo released version 4.0 of its object storage platform, CASTor. CASTor’s features include improved operational and reporting efficiency and a power conservation technology called Darkive. The technology automatically spins down disks and reduces CPU utilization based on parameters set by administrators.

■ Coraid EtherDrive Z-Series

Coraid announced its EtherDrive Z-Series NAS appliance, which marries the 128-bit ZFS file system to the company’s Ethernet SAN technology. It’s available in two configurations with either four-core or eight-core processing; the latter version comes with more RAM and an SSD cache.

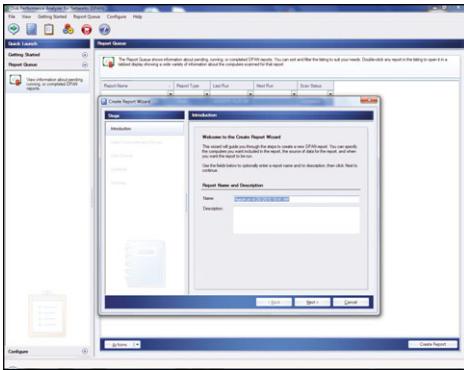


CORAIID ETHERDRIVE Z-SERIES

Starting at about \$1,000 per terabyte, the EtherDrive Z-Series is designed to deliver a high performance-to-price ratio, the company says. Its connectivity includes multiple 10Gbps or 1Gbps port options. The deduplicating appliance employs sophisticated integrity checks to detect and correct data corruption. It also supports thin provisioning, automatic tiering (SSDs), and unlimited snapshots.

■ Diskeeper Disk Performance Analyzer For Networks 3.0

Diskeeper Corporation Disk Performance Analyzer For Networks® 3.0 is a free utility that network administrators can use to detect fragmentation on the computers across their networks. The Disk Performance Analyzer can help network administrators make their enterprise’s systems faster, more reliable, and longer-lasting while improving productivity and



DISKEEPER

reducing the cost of network cleanup after fragmentation. Once Disk Performance Analyzer has been used to evaluate the level of fragmentation on the computers in a network, administrators can utilize additional Diskeeper products to defragment and prevent future fragmentation. For more on this product, see page 31.

■ EMC Data Domain Boost

EMC introduced its latest Data Domain Boost software, which distributes parts of the deduplication process to the backup server to accelerate backups. The offering is also capable of significantly reducing load on backup LANs and backup servers. DD Boost is currently available for Symantec NetBackup and Backup Exec, but not until the second half of 2010 for EMC NetWorker users.

■ EMC Ionix Storage Configuration Advisor 2.0

EMC unveiled the latest version of its Ionix Storage Configuration Advisor.

Version 2.0 supports agentless discovery and deployment, validates storage configurations in physical and virtual environments, and produces detailed reports and trend analysis that improve storage change and configuration management processes.

■ EMC VPLEX

EMC announced its EMC VPLEX technology, which provides nondisruptive, transparent data access and mobility across EMC and non-EMC storage platforms. EMC says the technology simplifies recurring information movement and improves storage utilization. VPLEX technology features a single cluster of up to four VPLEX engines with support for up to 8,000 virtualized storage volumes.

■ Enhance Technology EnhanceRAID E400 FR

Enhance Technology released the EnhanceRAID E400 FR, a cable-less four-bay USB, FireWire, and eSATA combination of RAID storage arrays for 3.5-inch SATA hard drives. The unit includes an LCD keypad control panel, true hardware RAID 5 data protection, and integrated multiple-host connectivity. The E400 FR supports 2TB worth of SATA II drives.

■ Iron Mountain Mimosa NearPoint For Dell DX Object Storage Platform

Iron Mountain announced that its Mimosa NearPoint email archiving product is certified for Dell’s DX Object Storage Platform, which is a file and digital content access, distribution, and storage appliance. The joint offering automatically archives email directly to the platform, enabling users to appropriately manage risk-relevant data and comply with Exchange and e-discovery requirements. Users can also employ custom retention policies and secure data using the unified system.

■ Iron Mountain Stratify Legal Discovery OnPoint

Iron Mountain announced Stratify Legal Discovery OnPoint, a hosted e-discovery tool designed to simplify e-discovery and



reduce costs with free processing and loading of unlimited data for early stage filtering. Features include hands-on data control, advanced analytics and filtering, and a one-time fee of \$500 per gigabyte for reviewable data only.

■ LSI Engenio 2600

LSI released the Engenio 2600, an entry-level external modular storage system that features four native 6Gbps SAS host interfaces and multiprotocol host connectivity. It can supply up to 40,000 I/Ops and up to 4GBps bandwidth for OLTP, transaction processing, and other intensive applications. It’s also scalable to up to 96 drives.

■ NetApp SnapManager 6.0 For Microsoft SharePoint 2010

NetApp unveiled SnapManager 6.0, a storage and data management solution that enables seamless customer migrations to Microsoft SharePoint 2010. This release offers a flexible and reliable storage infrastructure to support SharePoint Server 2010 environments. The product provides SharePoint Server 2010 customers with policy-based management of their data.

■ Neverfail For Microsoft SharePoint Server 2010

Neverfail has released a product for Microsoft’s SharePoint Server 2010 that

Go to Page 5





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PRODUCT RELEASES

Continued from Page 5

provides application-aware high availability and disaster recovery for all SharePoint Server elements, including database and application servers with search and index servers. Neverfail says its approach covers SQL Server databases, file system content, and Microsoft Exchange to provide farm failover.

■ **Paragon Software Group Partition Manager 11**

Paragon Software Group released version 11 of its partitioning software, Group Partition Manager. The software comes in four editions: Personal, Professional, Server, and Virtual Server. As the last implies, certain editions now support virtual drive partitioning. Also new are system migration support and the Paragon Alignment Tool, which can increase performance and drive lifespan, the company says.

■ **ParaScale Cloud Storage 2.5**

ParaScale released version 2.5 of its ParaScale Cloud Storage, which delivers advanced features for cloud scale data security, protection, and accessibility. It includes features to efficiently address 'big data' requirements by enabling data services and application integration directly onto storage nodes. ParaScale Cloud Storage is built to meet the needs of enterprise data centers or managed hosting providers.

■ **QLogic InfiniBand Fabric Suite 6.0**

QLogic released the latest version of InfiniBand Fabric Suite 6.0. The software package includes Virtual Fabrics, which automatically dedicate classes of service to applications within the fabric. It also features Adaptive Routing, which optimizes traffic flow, and Dispersive Routing, which load-balances traffic among multiple pathways.

■ **Quantum DXi4500 Disk Backup Appliances**

Quantum released its DXi4500 disk backup appliances, the DXi4510 and DXi4520. Each is designed for support backup, deduplication, and replication. The appliances also enable remote office tape replacement and Symantec OpenStorage API, and they provide a single point of management across storage tiers. The DXi4510 features 2TB of capacity, and the DXi4520 provides 4TB. Both appliances offer RAID 6 protection and up to 400GB per hour data ingest performance. They also support encrypted and compressed replication streams for up to 99% bandwidth savings, Quantum says. The DXi4510 costs \$12,500, and the DXi4520 is \$22,500.

■ **Sans Digital MobileNAS MN4LA+B**

This four-bay NAS is powered by a 1.66GHz dual-core Intel Atom processor and comes in a tower chassis. It supports RAID 5/6, real-time folder replication between NAS devices, iSCSI (initiator and target), and scheduled snapshots. Sans Digital says the MobileNAS MN4LA+B is an SMB device with enterprise features.

■ **SGI InfiniteStorage**

SGI has entered into an initiative with LSI to widen its SGI InfiniteStorage product line with LSI-powered configurations. The move includes entry-level and mid-range enterprise RAID-based products

with support for iSCSI, Fibre Channel, InfiniBand, and SAS and is application-ready for Oracle Database; VMware; and Microsoft SQL Server, Exchange, and SharePoint. The products have the ability to integrate with SGI's compute line environments, function as standalone storage, and integrate with compute lines available from other OEMs. The initiative will also give SGI partners access to LSI product data. Products within the SGI InfiniteStorage SP (Select Product) line include the InfiniteStorage 220-SP, InfiniteStorage 4100-SP, and InfiniteStorage 4600-SP.

■ **Stonesoft StoneGate IPS-1205**

This intrusion prevention appliance is made to protect data center services and intranets from internal, client-side threats (such as worms, drive-by infections, and malware on unauthorized removable storage) without hampering the speed of a 1Gbps network. The scalable appliance also covers servers with virtual patching until maintenance can take place.

■ **Synology DiskStation DS210+**

Synology released the Synology DiskStation DS210+, a secure NAS server for mobile or branch offices. Designed for SMEs with limited IT resources, the DiskStation DS210+ can replace PC network servers, Synology says. Features include share-level encryption, cloud backup with Amazon S3, remote backup, and diskless configuration.

■ **3PAR Virtual Lock**

3PAR announced Virtual Lock, a tool designed to help users of 3PAR InServ Storage Server meet data governance and electronic discovery requirements. Features include the ability to apply a configurable retention period to virtual volumes and volume copies and protect them against deletion, be it accidentally or maliciously.

■ **Unitrends Release 5**

Unitrends announced Release 5, the latest version of its backup appliance software. The release features data deduplication, vStorage-based VMware ESX and ESXi Backup, and new features for its disk-to-disk-to-disk archiving system. Release 5 is compatible with more than 100 different operating system versions and applications and features a new SQL Server backup option.

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by Blaine Flamig

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by Nathan Lake


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up.time also helps ensure you deliver proactive IT management for your enterprise. For example, outage avoidance features alert you of problem infrastructure and applications before they become

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Social Networking Nuisances

Continued from Page 1

can also be a launch point to attack and compromise other internal systems or databases.”

Twitter is also a well-known gathering place for all kinds of malware, to the point where the site had to create a filter to prevent legitimate and malicious users from posting links that led to known phishing sites or other malware. Fake support emails purport to link the reader to Twitter but lead to spam or malware sites.

Even scarier than the behavior of the hackers, though, is the behavior of the users. Social engineering doesn’t work without the participation of the victims, and what users choose to share or allow others access to on social networking sites can expose them to social engineering. Criminals display ever more inventive ways to get users to offer information freely (if under false pretenses) that they then use to steal information or even money from the company.

Not So Private

As anyone who reads about Facebook or who visits it regularly will know, the

site often adds new functionality that makes its users more visible to third parties—not their most sensitive information, necessarily, but more information about where they go, what they do, and what they click. Users on Facebook have to monitor these changes and make efforts to update their privacy settings to opt out of these new functionalities.

Generally, privacy on these sites is an illusion, and a failure to understand that often leads to trouble for the users. “There’s a natural trust of other users on the sites (because they are their friends, right?) as well as a belief that these sites have been built in a way to protect their privacy, which is often not the case,” Prince says. “So the problems can be widespread, and educating employees on the dangers of these sites is the best way to reduce problems.”

In other words, as with email, it’s important to warn users that what they think is private really isn’t and that it can be a jumping-off point for hackers to capture their personal information. “It should always be assumed by users that any information they post on a social

networking site can be seen by the entire world,” Prince says. “Remind them to use a different username and password for these sites than for other things like their online banking or work login. Too often users do this, and a criminal can figure it out on one site and use it on others.”

That issue is getting more urgent as users apply tools that unify all their communications and allow them to log in to

But don’t think that blocking is the answer, because even if it doesn’t cause a revolt among salespeople or others who use these sites professionally, it can be difficult to screen all of them out. You can block Facebook and then find that users are accessing another site you’ve never heard of that has the same functions and risks associated with it.

In that sense, policies are often the IT manager’s most usable tool for limiting

“It should always be assumed by users that any information they post on a social networking site can be seen by the entire world.”

- Perimeter E-Security's Kevin Prince

Top Tip: Consider E-Discovery Requirements

Although many of the threats involved with social networking are well understood, one emerging issue is e-discovery and forensics. It’s much more difficult to perform these compliance-related functions when social networking is involved because social networking sites aren’t set up to log who sees what or what is done at what time. “On sites like LinkedIn, there are different applications [and] different RSS feeds, people are scrolling over things, and there’s no good log to track what they actually do and see,” says Carl Herberger, vice president of information security and compliance services for EvolveIP (www.evolveip.com). “In the old days, if someone clicked on a link, they had read what was at that link. But now you can confirm that an application served up some information, but not whether the user read it; a person can be doing five different things in Facebook and it’s impossible to tell what’s happening.”

all of their applications at once. “People are going to be looking for that and trying to take advantage of it,” says Carl Herberger, vice president of information security and compliance services for EvolveIP (www.evolveip.com).

Prince also warns of plug-ins and other sites and services that allow users to link to social media sites for easier or enhanced access. “These sites usually require your authentication, and these sites are compromised more frequently than the social media sites,” he says.

Filter Or Forbid?

Web content filtering tools can be used to monitor how much employees are accessing which sites and how long they’re on them. Those same tools can be used to block social networking sites, either specific ones or the whole category of social networking.

the damage these sites can expose the network to. When blocking them altogether isn’t an option, policies that are communicated and enforced may screen the company from most of the potentially dangerous behaviors. “They can be a great tool for organizations, they just have to be controlled and managed properly,” Prince says.

Herberger notes that policies are more effective when enforced, and that means testing. If you announce a policy about social networking sites and then fail to determine whether employees are complying with it, your lack of enforcement may breed contempt. “Routinely test for the behavior you’re trying to promote or avoid,” he says. “The first test drives home that you’re trying to reduce risk, but it’s only by the third or fourth test that you actually get acceptable levels of the behavior.”

Energy Options

Continued from Page 1

In addition to wind, the laboratory is involved in numerous research projects aimed at alternative energy, such as harnessing ocean energy and tapping into the reserves of methane in the Earth’s crust.

Although solar and wind are the most discussed and implemented alternative energies, effort is being put into other forms, as well, such as hydro power, fuel cells, biomass, and geothermal. Each has its challenges but also potential. For example, in some smaller-scale applications, fuel cells can be used to replace the traditional battery plant for long-runtime applications. The power density of fuel cell stacks, coupled with very low maintenance and potential tax incentives, have made this power source one worth watching.

Going Alternative

In terms of implementation, there are some medium-sized and larger data centers and colocation facilities that have been exploring the use of alternative power. For example, Emerson Network Power (www.emerson.com) opened a new energy-efficient center last year in Missouri, with the state’s largest solar array. When the 35,000-square-foot center went live, it was 31% more efficient than traditional data centers, thanks to the solar technology,

precision cooling products, and other efficiency strategies.

When Emerson first decided to build the center, it set out to achieve silver-level certification in LEED (Leadership in Energy and Environmental Design) but ended up garnering gold-level instead, according to Jack Pouchet, director of energy initiatives at Emerson.

“We also knew the 7,800-square-foot rooftop solar array would contribute a portion of the energy needed to run the data center,” he says. “We purposely oriented the building in such a way and put the array at an angle to the building structure so that we could capture the most



This Emerson Network Power (www.emerson.com) data center is 31% more efficient than traditional data centers, thanks in part to its solar panels.

amount of sun in the process.” The result, he notes, is that the solar array covers up to 15% of the data center’s load.

The biggest challenge in terms of implementation was an internal requirement that

“Right now, the cost to get in is pretty high. But most likely, it won’t be like that forever.”

- Dimension Data's Kris Domich

there be no penetration of the roof over the working data center, Pouchet notes. The solar array is anchored by a purpose-built super structure that’s on a permanent tilt. He says, “As we were laying this out, we also made certain that we could get to the back side of the panels to wire them.”

One issue that usually crops up during the implementation of rooftop endeavors such as solar arrays is trees—not just because of shade but also because of the pollen and leaves that can blow onto the roof. Pouchet says that the building sits back far enough to minimize the issue, and the amount of rain and slope of the array also work to keep the modules clean.

Wind power is also sparking interest for data center use, especially in areas where wind farms already shuttle some power to regional customers. At Wyoming-based Green House Data (www.greenhousedata.com), for example, the 10,000-square-foot facility runs primarily on wind energy supplied by a local provider

and is supplemented with power from a renewable energy firm about 6 miles from the center.

The company’s president, Shawn Mills, notes that power costs have stayed fairly flat as a result and that the data center is about 30% more efficient than traditional data centers.

Looking Ahead

Although Green House is able to get nearly all of its power from local providers, Mills notes that it’s an unusual case, because it was able to locate its facilities so close to a wind power provider and a renewable energy company. For most data centers, using alternative power doesn’t mean making a clean break with the power company.

Instead, this type of power is now being used to increase efficiency and lower consumption costs, and most likely, it will take some time for smaller data centers to implement technologies that harness solar, wind, biomass, and other strategies in a way that’s cost effective.

“Right now, the cost to get in is pretty high,” says Domich. “But most likely, it won’t be like that forever. As more data centers start putting systems in place, and demand increases, hopefully the costs will start coming down.”

When Wireless Goes Rogue

Personal Wireless Access Points Can Spell Big Trouble To Otherwise Secure Enterprise Networks

by Christian Perry

IN A WORLD that demands Internet access anywhere and anytime, enterprises are increasingly encountering a devious foe: personal wireless access points. When wily employees aren't satisfied with their employer's Internet service or simply want to go online on their own terms, they are turning to personal devices that can provide access anywhere within the company walls. Although the use of personal wireless access points might seem harmless to their users, they can create a headache of epic proportions for data center and IT managers.

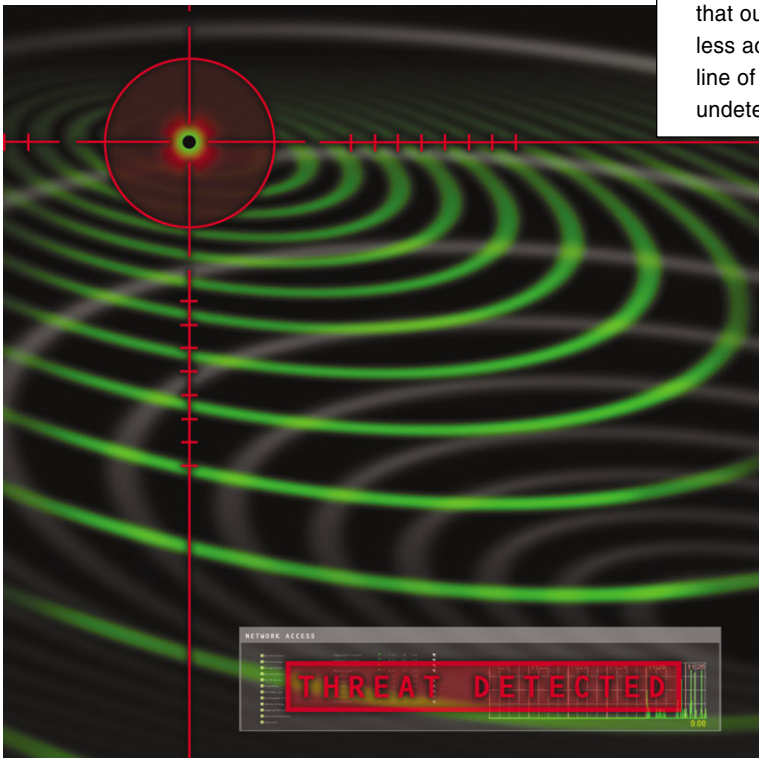
"It's never a good idea to connect something to a production network that has not been tested, most likely not configured properly, and doesn't meet corporate IT standards for security and network devices," says Martin Hack, executive vice president at NCP (www.ncp-e.com). "Aside from the fact that it's most likely a direct conflict with corporate information security policies, the potential issues range from network outages to corporate espionage and additional workload/troubleshooting for network and support staff."

Personal Demons

From a bird's-eye view, it's not tough to understand why employees are tempted to bring personal wireless access points into enterprise environments: They can provide Internet access for devices that aren't officially approved by IT to connect to the enterprise network. Even if the devices are approved for company network use, employees might prefer the ease of using technology they're already familiar with using at home. Because consumer smartphones and other mobile devices rarely leave the sides of many employees, it's no surprise that some seek creative ways to continue using them at work, regardless of security issues.

"Home users, without understanding the technological and security considerations, may assume that just by plugging in a consumer-level access point at work, they can facilitate the same conveniences provided by wireless at home," says Dan Katz, president of Genesis Integrators (www.genesisint.com). "As most IT professionals know, this is a Pandora's Box of problems from both a security and networking logistics perspective."

According to Katz, wireless access points—whether installed by the IT department or secretly by employees—represent the easiest way for intruders to access a company network. Even if an IT department takes precautions to prevent access points from being plugged into a company network, employees can still connect to external networks while being hard-wired to the corporate network. Katz says this creates a



bridged or back-door opening on what might otherwise be a secure network. This is particularly common in organizations that block sites such as iTunes and Facebook, because end users can use these wireless access points to subvert security policies.

Although employees might think these actions are harmless, IT departments generally put security policies in place for more reasons than simply ensuring productivity. For example, controls intended to filter out inappropriate activity, such as access to pornography, gambling, games, or social networking sites, are there to prevent employees from engaging not only in disruptive activities during business hours but also in activities that are embarrassing or even illegal, says Peter Brown, partner and national leader of Baker Hostetler's technology law practice (www.bakerlaw.com).

"[Another] problem occurs from signal overlap," Katz explains. "In a corporate environment, IT departments will spend quite a bit of time tuning the wireless network and, in many cases, spend thousands of dollars on a wireless survey to fine-tune the wireless network to maximize coverage and performance. Too much signal overlap, not enough, or the wrong wireless band signals can create an unusable wireless network or spotty coverage areas."

Sensible Security

Although there might be rare exceptions, it's generally not a good idea to let employees set up their own wireless access points, says NCP's Hack, even if those devices can add to employees' productivity. Instead, the task of building a universal and secure wireless network architecture should fall on the shoulders of the IT department, which can test the environment to ensure that it meets corporate security and stability requirements.

Along with that wireless architecture should come a well-defined policy that provides concise guidelines for employees on the use of the devices. "A clear IT policy should be distributed to all employees,"

Key Points

- Employees are increasingly turning toward personal wireless access points to skirt enterprise security policies and access social networking and other Web sites.
- These devices not only put employees at risk during company time but also can compromise company data, particularly when there is a bridged connection to the company network.
- A well-defined, well-enforced policy that outlines the use of personal wireless access points is generally the best line of defense against these often undetectable devices.

Katz says. "They should be required to sign the agreement, indicating they have read it and understand the policies. In a situation where an access point is found, each company will have to decide what, if any, disciplinary action should be taken against the employee. Our company's position is that it's more important to explain to the employee the potential consequences of placing an access point onto the network than to discipline them for the action."

Whereas an outright ban on wireless access points might seem like the most logical plan of attack for protecting an enterprise network, it's impor-

tant for managers to understand why employees are using personal wireless access points. David Schofield, director of wireless services for TAG (www.i-tag.net), says that mobile portability has become a way of life for employees, so when they enter the workforce, they prefer not to change the way they communicate. Genesis Integrators' Katz has found that the unauthorized installation of most access points occurs because employees simply desire to be more productive.

"Once the employee understands the problems this creates, this issue goes away and the employee becomes more of an advocate for network safety," Katz adds. "These situations also provide an opportunity for a company to consider deploying authorized wireless access points to aid in employee productivity." ■

Top Tip: Define Exceptions

Like other consumer devices, personal wireless access points can easily slip beneath the enterprise radar, in turn compromising security controls put in place by IT staff. However, according to Howard Melamed, CEO of CellAntenna (www.cellantenna.com), in situations where the devices might be necessary or otherwise useful, it's crucial that IT managers never allow the devices into their managed areas unless the following conditions are met:

- The personal access point is approved and tested prior to its deployment. The testing process should include hacker defense.
- The appliance can be integrated into the current management system. For example, some systems have proprietary software that manages access points along with routers and other devices.
- The appliance is placed with respect to the firewall(s) in the same manner as any other appliance.

Upcoming IT Events

For more Upcoming IT Events, see page 3.

Gartner IT Infrastructure, Operations & Management Summit
June 14-16

JW Marriott Grand Lake
Orlando, Fla.
www.gartner.com/technology/summits/na/it-operations/index.jsp

AITP Southwest Missouri
June 15

Springfield, Mo.
aitpspringfield.org

Green Data Center Conference
June 15-17

San Diego Super Computer Center
at University of California San Diego
San Diego, Calif.
www.greendatacenterconference.com

ISSA

St. Louis Chapter

June 15
St. Louis, Mo.
stl.issa.org

Oklahoma City

AITP Chapter

June 15

Oklahoma City, Okla.

www.aitp.org/organization/chapters/chapterhome.jsp?chapter=40

AITP Atlanta

June 17, 5:30 p.m.

Crowne Plaza Atlanta Perimeter NW
6345 Powers Ferry Road NW
Atlanta, Ga.
www.aitpatlanta.org

AITP Omaha

June 17

Omaha, Neb.

www.aitpomaha.com

AITP Long Island

June 18

www.aitp-li.org

ISSA

Upstate South Carolina

June 18

NuVox

301 N. Main St., Suite 5000
Greenville, S.C.
www.upstate-issa.org

AFCOM Central Ohio

June 19

Columbus, Ohio

www.afcomcentralohio.org

AITP

California Southland

June 23

www.aitpcalsouthland.org

ISSA Baltimore

June 23, 4:30 p.m.

Sparta Inc.

7110 Samuel Morse Drive, Suite 200
Columbia, Md.
www.issa-balt.org

AFCOM

Central Texas

June 24

Austin, Texas

www.afcom.com/afcomnew/CentralTexas.HTML

Integrate 2010: Uniting The World Of IT

June 24-25

Executive Caterers At Landerhaven
6111 Landerhaven Drive
Mayfield Heights, Ohio
gcle.itsmfusa.org/?q=content/integrate-2010

ISSA

Des Moines

June 28

3920 SW Camden Circle
Ankeny, Iowa
www.issa-desmoines.org

AITP Akron

June 29

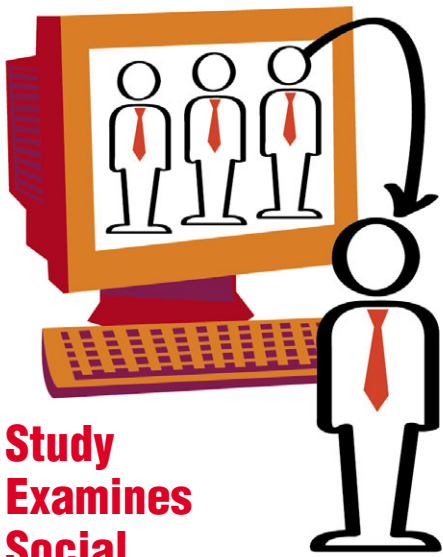
Akron, Ohio

www.akron-aitp.org

ISSA Inland Empire

June 29, 11:30 a.m.

Coco's Restaurant and Bakery
60 West Foothill Blvd.
Upland, Calif.
ie.issa.org



Study Examines Social Networking Security

Social networking is on the rise, but it's also introducing new ways for cybercriminals to attack. According to the Consumer Reports National Research Center, in the past two years, 40% of households were infected by a virus, and some Web-connected households have reported multiple attacks through viruses, spam, spyware, and phishing.

The Consumer Reports National Research Center also reported that Americans have spent an estimated \$4.5 billion and have replaced 2.1 million computers in the past two years because of malware and related problems. The majority of problems likely stem from users overexposing their personal information and not taking advantage of privacy controls. According to the survey, one in four households with a Facebook user reported they weren't using Facebook's privacy settings or said they didn't know about them. Facebook has more than 400 million active users.

According to Jeff Fox, technology editor at Consumer Reports, companies should be concerned about these statistics. "Many of their employees are doubtless posting a lot on Facebook and, as our survey shows, many may not be using sufficient privacy protection," Fox says. "That could lead to personal losses for their employees and possible disclosure of important business information to competitors or criminals."

Strong Corporate Policies

Fox says companies have a better chance of protecting themselves through strong corporate policies regarding social networks and online use.

"Businesses should establish a social network use policy and make it clear that employees are not to post business-related info on a social network without the knowledge and permission of their supervisor," Fox says. "If practical, the owners should themselves spot-check their employees' use of such services to ensure that employees are complying with the company policy. Proactive businesses ought to educate their employees in the use of such services to minimize the risk of personal loss."

Because many companies have a presence on social networking sites as part of a digital marketing plan, Fox suggests that organizations treat social networking the same as any online service. He says to keep any official social network account used for digital marketing purposes under the strict control of someone within the company and to remember that anything posted publicly online is available to everyone and can never be truly wiped away.

by Tessa Warner Breneman

Headaches From USB Devices

These Small, Handy Gadgets Can Cause Big Problems

by Bruce Gain

NOW THAT USB PORTS are a standard feature on PCs, it is possible to connect workstations to a number of devices, from digital cameras to thumb drives to printers, without having to use proprietary cables or to install separate software for each device. But although USB devices have made life easier for consumers, they pose major headaches for IT departments given how easily USB connections can be used to transfer data inside as well as beyond the firewall. Given the concerns USB devices pose, it is crucial to put policies and best practices into place to help reduce the risks involved.

Control What Comes In & Goes Out

The scenario is all too common: Someone brings a USB key to work with a new malware variation that is too new for the antivirus software to detect when the device is plugged into the workstation, and the virus quickly spreads to other PCs connected to the workstation on the network and eventually makes its way to the server room. "It is almost needless to mention the risk of an infected [USB] device that could bypass the perimeter protections and firewalls and have easy access to infect local workgroups and servers," says Haim Sternberg, president and owner of Cherry Systems (www.cherry-systems.com).

Although USB devices represent a major threat associated with malware coming into the network, it's also important to consider the risks they pose as a means for important data to leave the enterprise undetected. "It is relatively straightforward for an employee to download a large file from the office network to a connected storage device in a mobile phone or MP3 player or USB drive. That file may contain company confidential data or the client database," says Paul Wood, senior analyst for Symantec's MessageLabs Intelligence (www.message-labs.com). "Many USB storage devices are not encrypted, so any confidential data that may be stored on a device—even if the company policy permits—may fall into the wrong hands and will be immediately accessible to anyone else."

One way to reduce the threat of malware and sensitive data leaving the network is through software solutions. To protect data for mobile use, only encryption-protected USB storage devices should be allowed to access PCs outside the firewall. For enterprise workstations, it is possible to use software that disables the auto-run feature for USB memory sticks whenever they are plugged into a workstation port as part of an anti-malware solution, says Stefan Schiffert, CTO of Avira (www.avira.com). "[This way] malware can't spread via USB sticks," Schiffert says.

"For many companies, this is a sufficient and easy-to-use solution."

Through Windows management tools, it is also possible to block access to certain or all USB devices. "IT managers should make use of [Windows management] tools if they need fine-grained control over USB devices used in the company," Schiffert says.

Specify Where Devices Can Be Used

Inside the data center, USB keys can store essential utility and software files that can be plugged directly into servers for maintenance, diagnostics, or other tasks. Yet, according to Brad Kowal, assistant data center director for Shands HealthCare in Florida, precautions must be taken, such as designating server systems to which USB access is allowed. "Using USB keys for servers is the norm these days, as floppy disks and even CDs are going away. But for server support, keep the USB devices

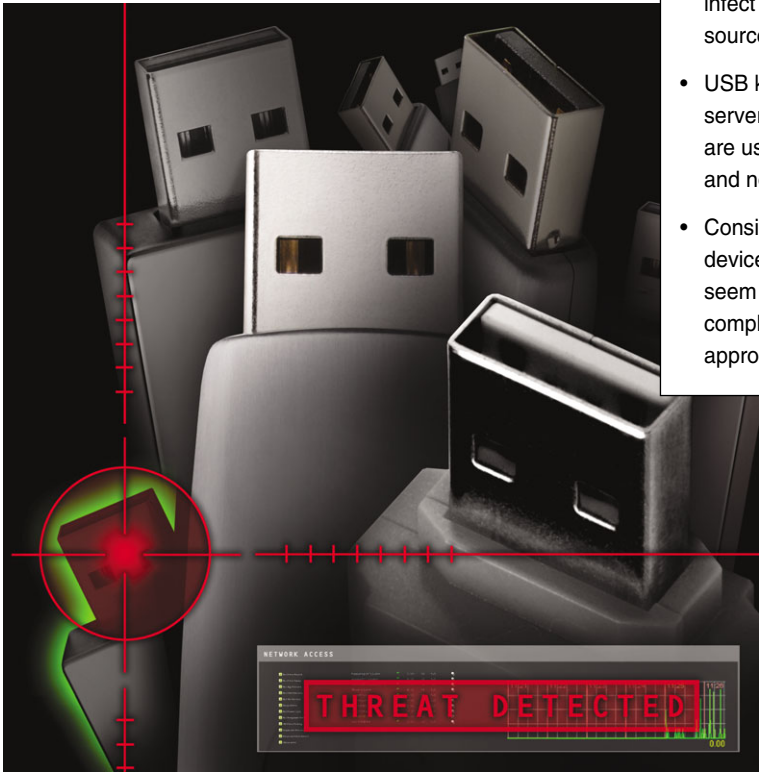
know, you are spreading a virus around on servers and workstations."

Consider Banning USB Devices

At the end of the day, it seems that many problems and security risks would be solved by locking down workstations, whether through BIOS controls, software, or both, so that no USB device can be connected to a user workstation. On a policy level, the use of USB devices could be banned completely; in today's world, however, such a draconian approach might not be feasible at most enterprises. "You could push group policy down all the way to the machines so that they will not recognize USB devices once plugged in,

Key Points

- It is critical to ensure that USB devices do not serve as a conduit for malware to infect the enterprise's network or as a source for data leaks beyond the firewall.
- USB keys can serve as handy tools for server maintenance, but make sure they are used only for the data center servers and not for user workstations.
- Considering the risks portable USB devices pose to the enterprise, it may seem appropriate to prohibit their use completely, but taking such an absolute approach is impractical.



but isn't that easier said than done?" Kowal says. "Doesn't the organization operate on USB keyboards, mice, and other devices?"

Other less extreme measures might be to only allow, as a matter of policy, a strict list of approved devices and usage terms, Wood says. "It may be appropriate to ban MP3 players or the connection of noncorporate devices or mobile phones, but these should extend externally, too," Wood says. "If you are allowed only to connect a corporate phone or flash drive, then you should also not connect it to a noncorporate computer externally." (For more information on dealing with employee-owned devices, turn to "Troubles With Employee-Owned Devices" on page 12.)

However, policy that allows for the use of only certain kinds of device types can be a challenge to manage. "Having strict policies may be one thing, but monitoring them may be much harder," Wood says.

Top Tip: Employ Centralized Management

Besides focusing on USB devices as a standalone challenge, adequately integrating their usage policies into an overall security strategy is crucial, says Paul Wood, senior analyst for Symantec's MessageLabs Intelligence (www.message-labs.com). "It is important to be able to minimize the risks an organization faces by reducing the threats that its users may be exposed to, whether by email, the Web, instant messaging, insecure networks, or unprotected USB storage devices," Wood says. "With centralized management, the administrators should be able to identify any potential breaches immediately, wherever the user is located, and not have to wait until they reconnect to the office network."

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The diagram illustrates the Sentry Power Manager architecture. At the top left, a cloud icon labeled 'BMS' and a cylinder icon labeled 'DATABASE' are connected by a dashed line to a 'SENTRY POWER MANAGER APPLIANCE' (a rack-mounted server). An arrow points from the appliance to a stack of three 'WEB BASED SPM INTERFACE' screenshots. To the right, a list of features for 'Sentry Power Manager' is provided: Enterprise Cabinet Power Mngt., Reports & Trends, Device Monitoring, Groups & Clusters, Kilowatt Readings for Billing, Auto-Discovery of Sentry CDUs, and Alarms. A green horizontal bar labeled 'PRIMARY ETHERNET PIPELINE' runs across the middle. Below it, a 'SENTRY: POPS SWITCHED CDU' (a tall rack-mounted unit) is connected to a stack of three 'WEB BASED CDU INTERFACE' screenshots. Arrows indicate the flow of data and control between the SPM Appliance, the CDU, and their respective web interfaces.

BMS

DATABASE

SENTRY POWER MANAGER APPLIANCE

WEB BASED SPM INTERFACE

Sentry Power Manager

- > Enterprise Cabinet Power Mngt.
- > Reports & Trends
- > Device Monitoring
- > Groups & Clusters
- > Kilowatt Readings for Billing
- > Auto-Discovery of Sentry CDUs
- > Alarms

PRIMARY ETHERNET PIPELINE

WEB BASED CDU INTERFACE

SENTRY: POPS SWITCHED CDU

Sentry: POPS Switched CDU

With Device Monitoring

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- > Outlet Power Monitoring (POPS)
- > Input Power Monitoring
- > Environmental Monitoring
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IBM & Indiana Sue One Another

In the wake of Indiana's cancellation of its 10-year contract with IBM to work on the state's welfare system, both parties are suing one



another. Indiana is seeking \$1.3 billion from IBM for breach of contract and other actions, while IBM countersued for \$52.8 million in equipment and payments. Indiana cited situations where it alleged that IBM's actions hurt specific individuals. The state also claims to have paid IBM \$2.64 million in disengagement costs already and will continue to do so through the month of June.

CA Changes Name

CA will change its name to CA Technologies, the company says. The name change is a result of comments from customers, partners, and market thought leaders, the company said in a statement. "The name CA Technologies acknowledges both our past and points to our future as a leader in delivering the solutions that will revolutionize the way IT powers business agility," says CEO Bill McCracken. "We are executing on a bold strategy to delight our customers with unprecedented levels of IT speed and flexibility." The firm's Web site will also be revamped.

PMC-Sierra To Buy Adaptec Channel Storage Business

PMC-Sierra is establishing a beachhead in the channel for x86 SAS RAID storage. The semiconductor and software provider has signed a definitive agreement with Adaptec to buy the latter's channel storage business for \$34 million in cash. The deal, which should be concluded by the middle of this month, includes about 90 Adaptec employees in California and six other locations. Jared Peters, Adaptec's vice president of sales and marketing, will helm what will be a standalone business unit under the PMC-Sierra name. Peters says Adaptec's product plans will not change in the near term, although later items on its roadmap will incorporate 6 and 12Gbps PMC-Sierra chips.



Google To Buy Internet Telephony Company

Google is planning to acquire Global IP Solutions, or GIPS, an Internet telephony and videoconferencing company. According to GIPS, Google has offered to pay \$68.2 million for the takeover. Google says the purchase of GIPS will improve Google's online services and competition against other telecommunications services from vendors such as Skype. Google has purchased three other video and VoIP companies, including Gizmo5 and On2. GIPS' largest shareholders have already stated their commitment to the offer based on a recommendation from GIPS' board.

Troubles With Employee-Owned Devices

Keep Employee Devices From Creating Headaches For IT By Taking Control Of Their Use

by Elizabeth Millard

SMARTPHONES, cell phones, notebooks, and other devices change so often that they can create major challenges for IT departments. Want to take control? Here are some tips for addressing the challenges.

Make Security The Top Issue

The biggest danger with employees using their personal devices in the workplace is that it introduces a major security hole. Without appropriate safeguards such as a VPN, a firewall, and antivirus measures, there's a good chance that any device could infect the network with the latest bug.

"Security is never something that should simply fall on the shoulders of the IT group," says David Lingenfelter, information security officer at Fiberlink (www.fiberlink.com), a company that helps organizations manage employee mobile devices.

Security education goes a long way toward ensuring that everyone in the company knows the security policies, the acceptable use policies, and what's expected of employees. "Whether it be notifying IT when they see something out of place or accepting that IT will want to monitor and have some level of control over their personal equipment when they want to use it as part of their day-to-day function, everyone in the company has to accept some responsibility when it comes to security," Lingenfelter says.

Focus On Standardization

Although employees will have a range of devices, a company can establish a corporate standard that allows for continuous testing and for creation of an infrastructure that supports that, notes Martin Hack, executive vice president of NCP Engineering (www.ncp-e.com).

"One challenge is compatibility with existing infrastructure," he says. "Not every smartphone is able to connect securely to the corporate infrastructure to read email or access internal applications. This usually leads to employees asking IT to support and configure their particular device, which introduces [an influx] of support and security issues due to lack of standardization."

Compatibility issues crop up because consumers tend to get the latest technology as soon as it hits the market, Lingenfelter adds: "The enterprise moves at a certain speed, and consumer products typically move a bit faster when it comes to adopting new technologies." He notes that one example that cropped up a few years ago was with different versions of Microsoft Office. With Office 2007, the software maker changed the naming convention of documents and spreadsheets, so people who got laptops with the software suite preinstalled would often send documents that other

people with an older Office version couldn't read until IT installed a compatibility pack on everyone's PCs.

To create better standardization, IT managers need to understand how employees use their personal devices, says Lingenfelter. That means talking to different departments to get a grasp of how a salesperson, for example, works in the field with email and access to CRM applications. From there, IT can create a list of devices that are compatible with existing resources.

Enforce The Policies

Having a policy that's not enforced is the same as having no policy, Hack says. One major misstep that he sees is constant exceptions for employees, which effectively punches holes into the existing security framework to accommodate the requirements for a given device.

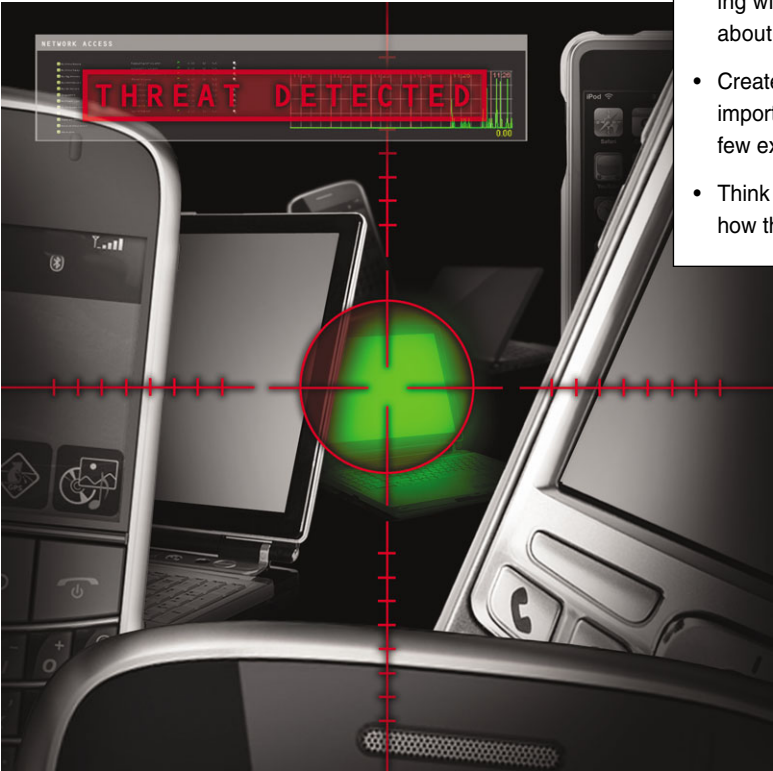
One part of a policy could be that personal devices get reset to factory defaults when the employee leaves the company, for example. Enforcing such policies is crucial to creating an environment that boasts better security and gives employees limits and boundaries.

Think About The Details

Devices bring up a host of smaller issues beyond policy creation, and one to think about is software licensing. Tracking inventory of which licensed software is installed on different machines is difficult enough on machines owned by the company, but having to stay on top of it on machines not owned and centrally managed becomes

Key Points

- Make security the top issue when dealing with devices and creating policies about usage.
- Create a company standard and, most importantly, enforce the standard with as few exceptions as possible.
- Think about software licensing issues and how they might affect IT operations.



even tougher, Lingenfelter says. Another issue can be maintenance; the IT staff may not be familiar with the technology that the employee owns, and when the employee installs a corporate application and runs into issues, it can be challenging to troubleshoot without understanding the system on which it's installed. Standardization can help ease these issues by limiting the types and brands of devices allowed on the corporate network.

One more detail for an IT manager to consider is personal calling plans. Lingenfelter notes that an IT manager can work with the finance department to determine if employees can expense their personal calling plan or if they'll need to join the corporate plan. The corporate option often boasts significant savings but may be limited to only one or two providers.

When it comes to employee-owned devices, headaches can abound. But by creating solid policies that can be enforced and staying on top of the smaller details, an IT manager can take control. ■

Top Tip: Use The Device To Centralize Control

Some device features can be more helpful than headache-inducing for IT managers, notes David Lingenfelter, information security officer at Fiberlink (www.fiberlink.com). For example, some email sync options can let an employee connect to any phone to get email but also act as reporting tools, letting IT know exactly what type of phone is being used and what version of the software is on it. Similarly, using a device that reports into the corporate server will help an IT manager know what phones are used, even if they aren't allowed by the company.

Lingenfelter says, "These centralized controls can also have a benefit if the device gets lost [or] stolen or if the employee leaves the company, as the IT manager has the ability to send a command to the phone and reset it to factory defaults, which removes all corporate information."

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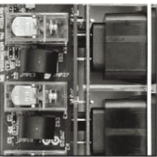
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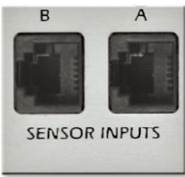
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Product	Black Box 24 Or 42U ClimateCab NEMA 12 Server Cabinet	Black Box ClimateCab NEMA 12 Wallmount Cabinet	KwiKool KPO 12-23 & 12-43 12-Ton
			
Description	<p>Black Box ClimateCab Server Cabinets can accommodate systems that reside in areas without adequate climate controls, letting users avoid making costly infrastructure changes. These enclosures are NEMA 12 rated for use in indoor locations with falling dirt; circulating dust, lint, and debris; and dripping or splashing liquids.</p> <ul style="list-style-type: none">• Save energy by cooling just the cabinet, not the entire room• Includes a 6,000 BTU (24U) or 8,500 BTU (42U) air-conditioning unit• NEMA 12 rated• 40-inch depth accommodates most servers <p>Best For: Server installations outside the protection of a climate-controlled data center.</p> <p>Price: \$4,249.95 (24U); \$5,499.95 (42U)</p>	<p>Secure wallmount ClimateCab cabinets provide a compact way to protect and cool sensitive components. Users can install the NEMA 12-rated wallmount cabinets in indoor environments where falling dirt; circulating dust, lint, and debris; and dripping or splashing liquids would otherwise cause problems for equipment.</p> <ul style="list-style-type: none">• Compact wallmount design saves space• Operates on a standard 115V power source• Single-hinged or double-hinged• Choose from a cabinet with a fan or an 800 BTU air-conditioning unit <p>Best For: Remote sites that have limited space and conditions that could be damaging to delicate electronics.</p> <p>Price: \$999.95 to \$2,795.95</p>	<p>The new KwiKool KPO portable air conditioners deliver a powerful 12 tons (139,400 BTU/hr) of cooling capacity in a compact size. The unit measures only 62 x 32 x 64 inches (HxWxD)—about the size of a typical 5-ton unit—and it's small enough to fit through a standard door.</p> <ul style="list-style-type: none">• Condenser and cold supply and return air can be ducted up to 60 feet using high-static blowers• Internal circuit breaker allows easy hookup to 208/230-volt three-phase (12-23) or 460-volt three-phase (12-43) models• Integrated phase and power monitor provides protection from electrical power quality issues• Low ambient temperature controls with a condenser operating range of 30 to 100 degrees Fahrenheit <p>Best For: Large computer rooms or emergency cooling during outages.</p> <p>Price: Rentals from \$450 per day or \$1,325 per week</p>
Contact	(724) 746-5500 www.blackbox.com	(724) 746-5500 www.blackbox.com	(800) 972-6600 www.atlассаales.com

Product	KwiKool SAC 1411	MaxPower CoolCube 10	MovinCool CM12
			
Description	<p>As one of KwiKool's Strategic Air Center series of portable spot coolers, the SAC 1411 features micro-processor digital controls and an Easy-Touch control panel. The unit is an air-cooled, 1.15-ton portable spot cooler that operates on a 115V/15A circuit. The SAC 1411 also supports 460CFM evaporator airflow and 1,200CFM condenser airflow.</p> <ul style="list-style-type: none">• Provides 13,850 BTU/hr of cool air• Operates on a standard 115V power source• Operating range between 60 and 110 F• Easy-access hinged panel with Kwikloks <p>Best For: Computer rooms, server closets, or warehouse use.</p> <p>Price: \$3,495</p>	<p>The CoolCube 10 is a unique modular air-conditioning system that users can install standalone or stacked in a 19-inch server rack, above a drop ceiling, or as a portable spot cooler. Features include a programmable control panel, electronic thermostat control, and a 2.5-gallon condensate collection tank.</p> <ul style="list-style-type: none">• Can be stacked up to three modules high• Provides 10,000 BTU/hr of cool air at 95 F at 60% RH• Stackable for redundancy or added capacity• Operates on a standard 115V power source <p>Best For: Computer rooms, server closets, and IT facilities with limited floor space.</p> <p>Price: \$2,600</p>	<p>The MovinCool CM12 is a ceiling-mounted air conditioner that is just 15.5 inches tall, making it ideal for spot cooling space-limited installations and server rooms. The CM12 frees up valuable floor space and features built-in flanges and mounting brackets, letting users install it quickly and with minimal effort. The CM12 is a cost-effective spot-cooling alternative to central air conditioning.</p> <ul style="list-style-type: none">• Provides 10,500 BTU/hr of cool air at 80 F at 50% RH• Provides 13,000 BTU/hr of cool air at 95 F at 60% RH• Operates on a standard 115V power source• Fits into tight ceiling spaces, freeing up floor space <p>Best For: Space-limited equipment rooms and cramped server and telecom closets.</p> <p>Price: \$2,895</p>
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Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Andrew Liebman

MovinCool CM25



The new MovinCool CM25 is a ceiling-mounted air conditioner that is 20 inches tall and compact enough to fit above a drop ceiling to spot-cool compact server rooms that need robust heat evacuation. The CM25 features a wall-mounted electronic controller that lets users monitor and troubleshoot problems. The unit also features built-in flanges and mounting brackets for easy installation.

- Provides 25,000 BTU/hr of cool air at 80 F at 50% RH
- Provides 18,000 BTU/hr of cool air at 95 F at 50% RH
- Operates on a 208/230V power source
- Wall-mounted controller with LCD

Best For: Server rooms and other spaces with high heat loads.

Price: \$6,995

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 12



The MovinCool Office Pro 12 is a portable spot-cooling air conditioner designed to lower operating temperatures of computers and networking, communications, and office equipment to maximize reliability and hardware lifespan. The Office Pro 12 is self-contained and portable and features an electronic thermostat and a programmable control panel for tailored cooling when and where you need it most.

- Provides 12,000 BTU/hr of cool air for maximum spot cooling
- Programmable digital controller
- Operates on a standard 115V power source
- No costly installation necessary
- Maintains ideal operating temperature for heat-sensitive electronics, down to 65 F

Best For: Offices filled with heat-generating electronics.

Price: \$3,655

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 18



The MovinCool Office Pro 18 offers superior cooling capacity without requiring a nonstandard power source. This portable air conditioner protects sensitive data and electronics systems from loss and failure, acting as an insurance policy for your infrastructure. The Office Pro 18 features an intuitive control panel that lets users designate when the unit operates.

- Provides 16,800 BTU/hr of cool air for maximum spot cooling
- Operates on a standard 115V power source
- Programmable controls enable weekend and after-hours cooling
- No costly installation necessary
- UL Listed for safe operation

Best For: Heat-sensitive office and data systems.

Price: \$4,065

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 36



The MovinCool Office Pro 36 delivers 36,000 BTU/hr of spot cooling for sensitive equipment. The Office Pro 36 features an intuitive control panel that lets users program the unit to operate after hours or on the weekend. The portable self-contained air conditioner requires no costly installation.

- Provides 36,000 ETL-verified BTU/hr of cool air for maximum spot cooling
- Operates on a 208/230V power source
- Features an AFCI plug for added safety against electrical arcing
- Supports plug-and-play condensate pump
- Easy-to-use programmable controls
- Self-contained, portable, and easy to set up and operate

Best For: Servers, routers, telecommunications, and other heat-sensitive equipment.

Price: \$6,995

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 60



The MovinCool Office Pro 60 delivers up to 60,000 BTU/hr of cooling capacity, making it almost twice as powerful as MovinCool's Office Pro 18. This portable air conditioner is designed to manage temperatures for computer networks, communications equipment, and office electronics. The self-contained Office Pro 60 is easy to install—just position the wheeled unit, plug it in, and turn it on.

- Programmable digital controller enables weekend and after-hours cooling
- Operates on a 220V power source
- Provides cooling to temperatures in the low 60s to maximize the life span of heat-sensitive electronics
- Condensation pump included for uninterrupted operation
- UL Listed for safe operation

Best For: Large office spaces and computer rooms filled with heat-sensitive electronics.

Price: \$11,145

(800) 264-9573
www.movincool.com/dealer.php

MovinCool Office Pro 63



Like its sibling the Office Pro 60, the MovinCool Office Pro 63 delivers up to 60,000 BTU/hr of cooling capacity and is ideally suited for the demands of large office spaces and heat-sensitive electronics installations. This portable air conditioner is self-contained and operates on 460V power for as little as 15 cents per hour.

- Programmable digital controller enables weekend and after-hours cooling
- Provides cooling to temperatures in the low 60s to maximize the life span of heat-sensitive electronics
- Condensation pump included for uninterrupted operation
- UL Listed for safe operation

Best For: Large office spaces and computer rooms filled with heat-sensitive electronics.

Price: \$12,495

(800) 264-9573
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Survey Highlights Access Governance Concerns

Cloud computing is undeniably on the rise, and with it comes a great wave of IT innovation. But as with the development and enthusiastic adoption of any technology, best practices, individual expertise, and common sense often must play catch-up with rapid growth, creating or exposing problems in the process. Cloud computing is certainly no exception.

According to a recent “2010 Access Governance Trends Survey” sponsored by Aveksa and conducted by the Ponemon Institute, enterprises are not doing a good job of keeping pace with the changes wrought by cloud computing.



Specifically, the study found that of those surveyed, 87% felt that individuals had too much access to IT resources that did not pertain to their positions; 72% of respondents did not feel that they were able to quickly respond to employee access requirement changes; about three-fifths admitted that use access policies were not routinely reviewed or enforced; about 65% lack sufficient staff to ensure proper governance; and 73% felt that cloud computing made it easier for individuals to skirt policies that they did have in place.

The Trouble With Cloud Computing

According to Mike Spinney, senior privacy analyst with the Ponemon Institute, a core part of the problem is a company’s loss of control over its data, as workers may use a cloud service and upload information to it without authorization. “Rogue adoption of cloud applications may be a violation of policy on its own and, depending on the application, result in the upload of potentially sensitive information to a platform outside of an organization’s control,” he explains.

This problem is nothing new or unique to cloud computing, Spinney says. “Individual users—early adopters—recognize an advantage to a certain innovation and they rush ahead to exploit that advantage, often without considering the implications to information security,” he says. Whether that’s an individual using a service for just a few documents or an entire department employing a larger-scale cloud service without the IT department’s involvement, information resources are decentralized in a potentially dangerous way.

Spinney also believes that strong leadership, company-wide coordination of data resources, good training, and consistent policy enforcement in the form of a CSO or CISO that also upholds a company’s goals is a necessary component to reining in rogue cloud adoption. “Organizations need to evaluate which products and platforms can best help them achieve their IT security goals [while] recognizing that technology alone cannot solve the problem,” he says.

by Seth Colaner

Virtualization’s Vexing Side

How Power & Cooling Problems Can Be An Unexpected Guest

by Christian Perry

IN AN IRONIC TWIST OF IT FATE, data centers often discover that their efforts to solve power and cooling problems through virtualization can actually create more problems. Without question, virtualization can improve the overall bottom line on the power bill through the consolidation of servers, but that very consolidation can in turn boost power and cooling requirements in smaller spaces. Data center managers who approach virtualization without this knowledge may find themselves scrambling for solutions.

“Virtualized servers accommodate multiple applications simultaneously, which increases power density and ultimately generates more heat within the physical space. In many instances, servers are operating below full capacity, which makes virtualization a good idea. However, it is important to compare hardware capabilities with virtual applications, as the additional power consumption could exceed the server’s available power capacity. To overcome this issue, data center managers should ensure their infrastructure can support the virtualized server’s power needs,” explains Matt Kightlinger, director of solutions marketing for Emerson Network Power’s Liebert Products business (www.liebert.com).

Virtual Headache

Virtualization has a well-deserved place in most data centers, thanks to the technology’s ability to make the most of servers and cut back on floor space requirements. However, those benefits can come with an unanticipated price, because the total power per square foot can increase even as the total power per unit of work decreases, says Andrew Hillier, co-founder and CTO of CIRBA (www.cirba.com).

“A new-generation server may be able to do twice as much work per watt consumed, but that doesn’t always mean they use half the power. A modern server running at a high level of utilization will often use more power than an older-generation server running at a low utilization level,” Hillier adds.

A data center using racks that draw a typical 2kW can discover that a virtualized rack needs to draw 12kW, says Nick Razey, CEO of Next Generation Data (www.nextgenerationdata.co.uk). However, if the data center sticks with 2kW racks, it would require six rack footprints—at six times the cost of just one rack. This can easily offset the cost-saving benefits initially intended by a virtualization deployment, as well as increase power and cooling needs.

Unless your data center is a brand-new state-of-the-art space, it likely wasn’t built with virtualization in mind. This can be problematic when virtualization does make an appearance, because introducing concentrated heat loads into a data center that has traditional power distribution and

Key Points

- Despite virtualization’s claim of decreasing power bills and saving space, the technology can increase power and cooling needs through increased server utilization.
- The concentrated heat loads spawned by virtualization are generally not solved with traditional power and cooling systems that are designed for a more uniform load across the data center.
- Monitoring, redundancy, and modeling can help to guard your data center against potential heating and cooling problems caused by a new virtualization deployment.

a traditional cooling system disregards the assumptions of relatively uniform load densities across the data center floor, says Jim Ludlam, data center and operations director at 3t Systems (www.3tsystems.com). A traditional cooling system attempts to overcome these concentrated heat loads by dumping greater volumes of colder air into the room, which increases

Obtaining the full range of benefits from virtualization is difficult when precautions aren’t in place to ensure the hardware running the technology remains up and running as it should.

the frequency of air changes and reduces the likelihood of hot spots.

“If you add loads, relocate equipment, add cooling, etc., you change variables and may just move your problems to new locations in the data center,” Ludlam says. “At the root of this is the fact that traditional data centers are not flexible and subject to too many variables. Without addressing this, facilities will always be subject to redesign, renovation, or rebuilding as business requirements change. Business owners do not like to hear that the strategic project they just approved did not account for the necessary power and cooling upgrades in the project ROI—or worse, that the project cannot be taken live until the unplanned expenditures for power and cooling are made.”

Come Prepared

Obtaining the full range of benefits from virtualization is difficult when precautions aren’t in place to ensure the hardware running the technology remains up and running as it should. Monitoring workloads is particularly crucial, because a server’s saturation can decrease

performance from a single virtual machine to all the hosted servers, says Javier Rivera, director of IT infrastructure at Softtek (www.softtek.com).

“By monitoring, we are able to make key decisions, such as resource optimization, load balance between host servers, etc. One of the capabilities that virtualization software offers is the migration of virtual machines from one host server to another, giving you the ability to balance and distribute resources of the host servers,” Rivera says.

Rivera also points to the importance of support and warranties for hardware running virtualization technology, along with plans that handle parts replacement to ensure that service is restored as soon as a part is replaced.

Liebert’s Kightlinger also recommends using modeling methods such as computational fluid dynamics to estimate how the changing IT environment will impact the temperature profile—which in turn lets data centers adjust infrastructure accordingly to support virtualization. Beyond modeling, Kightlinger also advises monitoring for hot spots, which

could be as simple as walking through the data center and feeling for hot spots or as complex as conducting regular data center assessments. **P**

Watch For Warning Signs

Whether a physical server is damaged due to hardware issues, natural wear and tear, or excess heat caused by poor cooling systems, the repercussions can be exponential if that server also holds virtual servers. Miguel Gallegos, service leader of the Center of Excellence of Virtualization at Softtek (www.softtek.com), identifies several warning signs that can point to potential problems with virtualization hardware.

- Decreased or slow application performance
- Disconnections
- Operating system errors
- Errors that appear in monitoring logs
- Detonated alarms from monitoring tools

FEATURED PRODUCT

Get W.I.R.E.D

Use Shields Environmental
To Procure & Repair Your Equipment

by Nathan Lake

W.I.R.E.D (Warranty, Inventory Management, Repair, Exchange, and Disposition) is a new program from Shields Environmental that's designed to be a more economical and effective way to procure and repair old equipment than locked-in repair contracts. As a trusted vendor, Shields can test your equipment and provide you return parts that feature solid warranties.

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begin, you can take Shields' comprehensive energy survey to discover your company's current energy consumption. Shields will highlight the areas where you can immediately make cost and efficiency improvements. Most organizations see a return on investment within 15 to 24 months and realize energy savings of up to 40%.

Resolve Excess Inventory

Shields Environmental has been managing asset disposals for the telecom industry since 1979, and with its extensive customer base, you can take your obsolete equipment and turn it into a revenue stream. Both brand protection and risk management are key elements of the W.I.R.E.D

service, and Shields ensures compliance with both existing and forthcoming environmental legislation. For instance, Shields delivers full reports that cover the movement of the equipment, how much you stand to financially gain, and information about managing the environmental risk.

Exchange

It's typically more economical to replace and recycle bad equipment than it is to repair the broken components. To help you make the most economical decision, the W.I.R.E.D program provides you with real-time values, such as timeframe, cost of shipping, and exchange price. When you exchange parts with Shields, you'll generally receive your exchange equipment within 48 hours of the receipt of order. By spending less time on obtaining repair services, your data center can return to working at full capacity as soon as possible.

Shields also offers a warranty exchange service, where it will obtain the warranty equipment on your behalf to reduce administrative time working with the original suppliers. This gives you a single contact for all warranty returns, which is especially helpful in a data center where you have a variety of vendors to deal with. Any units will be tested prior to returns to avoid costly NTF (no trouble found) charges.

Repair Services

If you do decide on repair, Shields will send the electronics to a state-of-the-art lab in Sanford, Fla.; another lab in Concord, N.H., is currently in prep stages. The lab functions as both an in-house testing facility for products being shipped to customers and as a way for customers to test circuit cards,

frames, and new software prior to integration onto their network. If you opt to send in large pallets of equipment for repair, Shields will produce a detailed report for the most economical solution (either repair or exchange) based on the current value of each component, per individual serial number.

How W.I.R.E.D Works

With the W.I.R.E.D program, Shields gives you online access to monitor the status, location, and asset recovery stage of your equipment. You can request quotes or recall the units and generate purchase orders through the W.I.R.E.D software. Here's a quick breakdown of what W.I.R.E.D can do for you:

1. Submitted equipment is scanned into Shields Environmental databases with CLEI Code, OEMPN, PID (if applicable), and OEM serial number.
2. If covered under a valid warranty, Shields will contact the vendor and return a known good unit to the end user.
3. Equipment no longer wanted by the end user, based on buying history, is transferred to Asset Recovery and sold. You receive a pre-negotiated revenue share at the end of each month.
4. If a repair or exchange is necessary, the W.I.R.E.D system will tell you which option is the most economical for the return of your equipment.
5. At the end of the year, you'll be provided with environmental reports to indicate how your organization has reduced its carbon footprint and utilized safe recycling methods.

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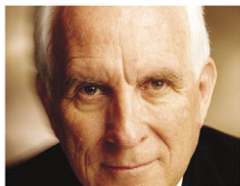
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McAfee Sees Increase In PDF Attacks

Exploits of Adobe's PDF software have jumped drastically in the past year, according to McAfee. Toralv Dirro, a security strategist at McAfee, says that in 2007 and 2008, only 2% of malware exploited vulnerabilities in Adobe's Acrobat and Reader software. That number rose to 17% last year and then soared to 28% in the first quarter of this year.

Microsoft has also noticed the rise in PDF attacks, noting that it found 46% of all browser-based exploits during the second half of 2009 targeted vulnerabilities in Adobe Reader. And according to Symantec's latest Internet Security Threat Report, PDF exploits were responsible for 49% of Web-based attacks in 2009, compared to only 11% in 2008.



Dirro says hackers are finding PDF exploits more useful for a number of reasons. Vulnerabilities in operating systems or popular browsers are becoming more rare and more difficult for attackers to reliably exploit. Adobe's PDF software also has a large install base, making it "a very attractive target," he adds. In addition, PDF files are regarded as safe when compared to other file formats, Dirro says, making them useful in targeted attacks where the victim thinks he is opening a safe file.

Fighting Malicious PDFs

Adobe has already started to address the problem. The company says the majority of PDF exploits take advantage of software that has not been updated. So, in mid-April, the company began silently updating its users' copies of Reader and Acrobat.

Dirro says enterprises can take a number of steps to protect themselves from PDF exploits. IT should make sure that all computers are using the latest versions of Adobe Reader or whatever PDF software they use, he says. They should also distribute hotfixes that can quickly address security problems. "This is general advice that should be applied to all software used to display/process data provided from untrusted sources," Dirro says.

Administrators should also run up-to-date antivirus software, which can detect exploits in documents and in many cases react faster if a new vulnerability is being exploited, he says. In addition, enterprises should add protection and monitoring on systems used by personnel who are likely targets for attacks, such as executives and employees in finance and research and development.

Dirro says he expects PDF-based attacks to continue, although their extent is hard to predict. "In fact," he says, "it can be dangerous to completely focus on PDF, as determined criminals may use this to use other venues of attack that are monitored less while everyone's attention is on one single problem."

by Kyle Harpster

Earning A LEED Certification

Going Green Is A Worthwhile Investment

by Jean Thilmany

• • •

ACHIEVING LEED (Leadership in Energy and Environmental Design) certification, whether for a data center or the building in which it's housed, can pay for itself in terms of cost savings and in marketing strategy, experts say, but getting there is no small task.

The LEED green building rating system, developed in 1998 by the U.S. Green Building Council of Washington, D.C., sets standards for environmentally sustainable construction. The program certifies buildings based on benchmarks for designing, building, and operating green buildings.

Although the USGBC currently doesn't offer LEED certifications specifically for data centers, those standards will likely be coming within the next few years, says Tom Lowry, chief technology and sustainability officer at technology consulting company Corus360. His company recently revamped a 1974 office building into a LEED gold-certified data center.

The USGBC is currently considering standards that would apply exclusively to data centers seeking LEED certification, according to officials at the Lawrence Berkeley National Laboratory, which helped develop the standards under consideration.

The USGBC awards points to enterprises seeking certification for their buildings. Earn enough points, and you can achieve LEED certification at a specific level, Lowry says.

Things To Consider

If your enterprise is interested in attaining LEED certification for its data center, there are several things that data center managers and enterprise execs need to consider:

- Enterprise execs must show that plumbing and indoor water fixtures use a minimum percentage of water (as laid out by the USGBC).
- They must be able to measure the overall energy efficiency of the data center and show that those measurements meet certain metrics.
- Execs need a procurement plan to show they will buy environmentally efficient products.
- It is necessary to demonstrate the solid-waste transfer program meets LEED standards.
- Managers and execs will need to routinely test indoor air for pollution levels, which must meet LEED standards.
- Enterprise executives will need a green-cleaning program that makes use of environmentally sound products and procedures.

Any building, data centers included, can be LEED certified if enterprises follow the guidelines set out by the USGBC. Tom Coalson, a LEED-certified consultant to the construction and building industry, says data centers can be certified under a variety of programs. The two most common being LEED for New Construction and LEED for Existing Buildings: Operations and Maintenance.

One of the challenges with LEED certification is that it wasn't intended for data

Key Points

- You may have an easier time certifying the building that houses your data center rather than the data center itself.
- Many LEED contractors likely won't be familiar with the complex energy use models they'll need to run for data center certification. Find a knowledgeable contractor who is willing to work with you.
- Moving toward a LEED facility—even if you don't become certified—is a money-saving investment.

centers. The program was designed to address commercial office buildings. Lowry explains that due to the program's success, many others—such as data center designers—are interested in certifying their facilities.

"Right now, LEED measures a lot of different factors, like interior air quality, comfort, and accessibility to alternative forms of transportation," Lowry says. "There's a lot of stuff in there the cynics will say doesn't fit the data center. But the bulk of the points come from reducing energy and water consumption, which are critical to all data centers."

The Benefits Of Certification

Don't let the lack of LEED certification standards specific to data centers deter you from getting started on certification, Lowry says. Making the move toward a LEED facility, even if you don't achieve certification, is always a step in the right financial and environmental direction, he says.

With the recent improvements made to the office building in which Lowry works, he says his company projects a 27% reduction in energy use after meeting LEED goals. He explains that the financial payoff also comes in terms of customer referrals for individuals interested in working with an environmentally responsible data center.

In some instances, an enterprise may decide it isn't feasible at this time to become LEED certified. Lowry says an enterprise may choose to work to certify the building that houses its data center rather than certify the data center itself. This strategy also reaps cost savings. As part of the LEED program, an enterprise might paint the roof of the data center

building white to reflect sunlight rather than absorbing it as heat into the building, as typically happens. This strategy helps the data center housed within the building become more energy efficient, Lowry explains.

Whatever route you take—whether choosing to certify the data center or only the building in which it's located—Lowry strongly advises enterprises to hire a LEED-certified consultant to work with them during the process. Although a LEED-certified consultant isn't necessary, they do know the requirements inside out and can offer invaluable information and insight, he adds. Lowry also recommends choosing contractors and subcontractors familiar with the LEED process.

"As LEED certification becomes more prevalent, I think a lot of firms are going to try to jump into the green building space who might not be qualified to guide you," Lowry adds. "You really do need LEED-accredited professionals to work on your project."

Coalson says you should be aware that none of the LEED certification programs these professionals must undergo deals with IT resource management, so they may be unable to advise you when it comes to those complex energy models.

Not Ready Yet?

If going after LEED certification seems too large a hurdle at the present time, don't worry. Coalson explains that facilities managers can take a number of steps to reduce energy and power usage so, when the time is right, the certification process will go smoothly.

To get a handle on energy usage, data center managers can run a thorough and item-specific evaluation of the facility's power requirements. After that, they can make cost-benefit analyses to determine areas where they should invest to lead to the greatest and quickest return for their energy dollars, Coalson says.

"Any LEED-qualified architect, designer, engineer, or contractor can help with all of the energy reduction opportunities available on the building side of the equation," Coalson says. "But most of these contractors will be less qualified to deal with IT energy management."

Think long term as you replace equipment, Lowry advises. "If you're going to be putting in new generators, make sure they're as efficient as you can possibly get," he says. "You might spend \$4,000 less on a system up front, but it will cost you much more to power it over the lifetime. This is stuff people think about when they're getting a new refrigerator, but it hasn't been looked at as much commercially as it should."

So even if you're not ready to become completely LEED certified, taking steps in that direction can impact your bottom line, Lowry says.

"LEED gets you to think about the long-term impact and benefits you'll get by doing what you're doing," he adds. ■

SIX QUICK TIPS

Better Bandwidth Management

Conserve A Precious Resource

by Sixto Ortiz Jr.
• • •

IN TODAY’S UBER-CONNECTED enterprise, seemingly plentiful network bandwidth is a precious resource. Even though end users might believe there’s plenty of bandwidth to support business applications such as ERP systems, email, and VoIP, the fact is network engineers are fighting a constant battle to allocate bandwidth.

Thankfully, there are options for network administrators facing the daunting task of managing network bandwidth in their enterprises. Read on for some quick tips on how to efficiently manage network bandwidth.

Ensure Quality Of Service

One difference in today’s operating environment is the emergence of applications, such as VoIP and video, that require plenty of bandwidth and have strict timing requirements. Latency can severely affect these applications, leading to poor performance and frustrated users.

Because this type of traffic is different from traditional types of network traffic such as email and Web browsing, it must be prioritized. This is where quality of service, or QoS, comes into the picture.

Frederic Hediard, vice president of product management for Streamcore

(www.streamcore.com), says network administrators must implement a solution that allows bandwidth to be dynamically assigned to the most critical traffic to ensure that end users have a quality experience while using network applications such as VoIP and/or video communications.

Hediard recommends that administrators employ specific criteria when choosing a bandwidth management application. For example, says Hediard, a good bandwidth management system should feature automated QoS engine capabilities, per-session granularity of the QoS engine, up to 100 classes of traffic or more per system, multi-level shaping capabilities, and bandwidth management for both a local or remote access link.

Cahit Akin, CEO of Mushroom Networks (www.mushroomnetworks.com), says certain types of traffic—such as VoIP—are more sensitive to delay/jitter than others, so they require prioritization via QoS. Some QoS-enabled routers, he adds, provide prioritization for VoIP, Citrix, and SaaS types of applications.

Understand Traffic

Without understanding network traffic patterns, it is impossible for administrators to determine how to best manage that traffic. Without a baseline, any efforts to manage network traffic will be akin to flying blind.

Effective bandwidth management, says Vess Bakalov, CTO and senior vice president of products for SevOne (www.sevone.com), is all about having good information. The more important a link, he adds, the more granular the information needs to be. For example, Bakalov says, five-minute polling for a critical link carrying latency-sensitive data is wholly inadequate. Thus, administrators must be able to poll critical links at high frequencies, preferably 10 seconds or less.

Dirk Paessler, CEO of German company Paessler AG (www.paessler.com), says administrators should understand their inbound and outbound traffic by monitoring plain bandwidth usage of border firewalls

through SNMP. Also, internal traffic patterns should be understood by monitoring bandwidth usage for all single ports for core switches. Finally, says Paessler, monitoring border switches and/or core switches using NetFlow to see the top talkers, top connections, and top protocols in a network can provide insights into traffic patterns.

Tools such as NetFlow, jFlow, sFlow, and others allow administrators to understand bandwidth usage, says SevOne’s Bakalov. These tools, he adds, allow administrators to quickly and continuously monitor the makeup of traffic traversing the most critical links, thus enabling the detection of bandwidth hogs and wasteful traffic, as well as providing an understanding of applications using the network. Then, administrators can make good decisions addressing traffic prioritization and policies that eliminate wasteful traffic.

Use Trending & Baselining

Understanding network traffic patterns is the first step toward effectively managing network bandwidth. A critical piece of this puzzle is developing enough of a “traffic history” via baselining and trending so abnormal situations can be spotted and mitigated before application performance is affected.

SevOne’s Bakalov says continuous monitoring is key to bandwidth management; additionally, trending and baselining bring a level of automation and proactive prediction that most other techniques miss.

Highly granular baselines—15 minutes or less—over predictable business intervals can allow administrators to spot deviations from the norm before they become problems and affect application performance and the quality of the user experience.

Bakalov also recommends that administrators collect significant amounts of historical data so they can develop trending that effectively predicts performance. As a rule of thumb, he says, admins should collect historical data for six times the length of the interval for which performance needs to be predicted. So, for example, about six months of historical data is required for a one-month prediction.

Police Users

A key component of effective bandwidth management is the curtailing of wasteful bandwidth usage. When users are free to use bandwidth wasters such as YouTube, network performance can be severely degraded. Effective policies that prevent wasteful bandwidth usage are thus necessary.

Mushroom Networks’ Akin says using tools that allow administrators to filter and limit nonbusiness traffic helps

Easiest Tip:

Share The Responsibility

Perhaps the easiest thing administrators can do to effectively manage bandwidth is to spread out the responsibility of doing so. For example, says Ermis Sfakiyanudis, president and CEO of eTelemetry (www.etelemetry.com), managers should be empowered to monitor their workers’ Internet usage. This not only helps policy enforcement by placing a heavy price on noncompliance, but it also relieves the burden on IT for enforcing compliance.

Best Return On Investment:

Schedule Bandwidth Usage

Simple common-sense scheduling can give administrators a powerful weapon for effectively managing bandwidth. For example, says Cahit Akin, CEO of Mushroom Networks (www.mushroomnetworks.com), processes such as data replication, online storage, or the use of disaster recovery-type cloud applications can be scheduled to run for off-business hours, thus reducing network traffic demands during peak hours.

Also, Akin adds, broadband bonding appliances allow administrators to combine broadband connections such as DSL or cable into single-IP connections, thus cost-effectively delivering bandwidth, especially to SMEs and branch offices.

administrators limit network traffic that is not work-related.

Todd Whitlock, co-owner of The Help-Desk Company (www.thehelpdeskcompany.com), says organizations should throttle or limit Internet applications such as streaming technologies with traffic-shaping tools. Additionally, Internet content filters should be used to block known adware and/or spyware sites, which can not only compromise a system by exposing a company to data loss and decreased security, but can also cause heavy, unwanted traffic.

Ermis Sfakiyanudis, president and CEO of eTelemetry (www.etelemetry.com), says administrators must establish Internet usage policies that clearly designate unacceptable behavior. And, he adds, investments should be made in network tools that manage and document Web usage, so administrators can effectively enforce Internet usage policies. There are tools, for example, that alert admins to excessive bandwidth consumption or Web surfing, he says. ■

BONUS TIPS

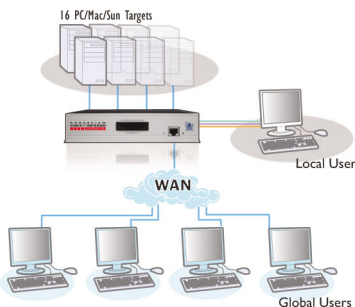
■ **Check bandwidth costs.** Cahit Akin, CEO of Mushroom Networks (www.mushroomnetworks.com), says administrators should regularly review bandwidth costs (say, every three to six months), so cost savings can be identified.

■ **Match bandwidth to job type.** Ermis Sfakiyanudis, president and CEO of eTelemetry (www.etelemetry.com), says administrators should determine which employees require more bandwidth to do their jobs and which ones need less and then allocate bandwidth accordingly.

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United States Ranks As Top Spam Producer

Of all the spam-relaying countries, the United States ranks No. 1: According to Sophos, the United States accounts for 13.1% of all spam produced. Noticeably absent from the top 10 is China, a country that typically has a presence in the top spam distributors globally. The United States is part of Sophos’ “Dirty Dozen,” a list of the top 12 spam-deploying countries between the months of January and March 2010. The list includes Vietnam (3.4%), Russia (3.1%), and other European countries. Rounding out the top “gang of four” are India (7.3%), Brazil (6.8%), and South Korea (4.8%).

In the past, China’s reputation as a spam-deploying country was confirmed by its initiation of targeted attacks on international companies and networks. But, in the Sophos report, China’s spam accounts for 1.9% of the world’s spam.

Other countries will assume the new role of reigning spam-sender, though, according to Chet Wisniewski, senior advisor at Sophos. “The absence of China shows that regardless of action in one specific place, spammers will find compromised computers and other nations will step up to take their place,” Wisniewski says. This would account for the fluctuation of global spamming statistics in recent years.

“The U.S., UK, and other Western nations have declined in percent as more people in the rest of the world have come online. We will likely see a continued shift to developing nations with large populations as their average citizens gain access, as well,” Wisniewski says.

High Volume Of Online PCs

The countries that are seemingly notorious for spam distribution are those that host a high volume of online PCs. Countries will continually swap spots as their Internet network infrastructure develops. “A country’s ranking in this list directly correlates to the number of Internet-connected PCs and how secure they are,” says Wisniewski. “Most of the top countries in the list remain the same, and many of the new entrants that bumped other nations are developing nations.”

The short-term threats in developing nations are the unprotected or underprotected network of PCs. The number of vulnerable systems will surely increase, leaving them susceptible to attacks, botnets, and DDoS attacks, Wisniewski says.

“Spam is a global problem and as more and more computers become infected globally, the problem isn’t likely to let up,” says Wisniewski. “IT managers need to remain vigilant and expect volumes to continue to increase with the larger number of new computers entering the Internet age.”

by Joanna Safford



Availability Architectures

How Do They Compare?

by William Van Winkle

. . .

ACCORDING TO Michael Hogan, global offering manager with IBM Global Technology Services (www.ibm.com/services), data center availability is half art and half science. The goal is to protect the critical data processing load from unscheduled outages, either from loss of utility services or from a failure of critical IT equipment operating inside the data center. While the strategies used to assure availability in these two areas overlap, the main focus is on the IT side. What are the key approaches to keeping IT resources available, and what are the main benefits and pitfalls of these strategies?

Four Major Options

In addressing data center availability, four architectural approaches are common. Some managers see these as competing—a “pick one” sort of option—but in reality, these four tend to be complementary. However, each has its pros and cons.

N+1. This is arguably the most popular approach for redundancy at the network layer. N+1 essentially means that in any resource pool, there is one extra unit on standby, waiting to seamlessly step into the place of a failed unit. If a Web server application requires five systems to run 24/7, an N+1 architecture would have a sixth system running alongside the five, ready to become instantly active in case one of the main five fails. The good side of N+1 is that it significantly increases the “nines” availability of a given system or application. The downside is the additional complexity and management costs required to maintain it. This can include multiple vendor relationships.

Fault-tolerant hardware. Whereas N+1 tends to apply at the system level, fault-tolerant hardware applies at the component level. This could take the form of redundant power supplies in a server chassis or redundant hard drives in a RAID. Fortunately, fault-tolerant components tend to be relatively cheap. Unfortunately, specialty components, particularly in complex environments, can be very hard to find.

Clusters. “For servers, the ability to abstract the computational workload from the physical computer is a crucial component of availability design,” says Paul Dowling, vice president of ITS Hosting, Network, and Information Security at

Avanade (www.avanade.com). “Many of today’s failures still occur at the physical layer: mechanical issues, overheating, firmware bugs, and so on. Anything you can do to keep your computational workloads at arms-length from the physical infrastructure will greatly improve your availability design. Clusters are especially useful for a system’s database layer to achieve a degree of fault-tolerance in mastering your data.”

On the whole, clustering is now mature enough to enjoy widespread, stable support from operating systems and applications. However, it’s still possible for cluster nodes to fail and push their loads back onto remaining nodes. This means that nodes sometimes need to be overbuilt or else resort to N+1 types of redundancy.

Virtualization. Virtualization helps minimize the risk of hardware failure. Even virtualized desktops can help reduce system downtime and keep workers more productive. With recent improvements in hardware-based acceleration for virtualization, there is less and less impact to application performance from virtualization. The big possible danger is that if the virtualization host goes down, multiple virtual machines are likely to go down with it.

Assessing Options

Rachel Dines, Forrester Research analyst, believes that fault-tolerant hardware is the most effective way to approach availability, although “FT” tends not to come cheap. Clustering a group of two or more servers or nodes in order to increase application availability is often more affordable.

“Server virtualization is a good alternative to fault-tolerant hardware and clustering,” says Dines. “You can have two fault-tolerant VMs that are running lockstep with each other on different machines, so if one fails, the other will continue without disruption. Alternatively, you might have clustered VMs where a surviving node in the HA cluster can restart the affected virtual machines on another node within the cluster. This is not automated, however, and will take a few minutes for the failed image to restart on another node.”

Hogan believes that these four approaches can’t be evenly compared to one another if only because no two CIOs have identical business needs. And because no group can afford to build its own availability solutions from the ground up, compromises

have to be made when deciding on any given approach or how to interweave multiple approaches.

Moreover, it’s very difficult to correlate dollars to the impact felt by solution compromises, because 10% shaved off of an N+1 strategy will likely have a very different impact than 10% taken from a virtualization budget, and which is “worse” will depend on the business and its application. Said simply, there are no cookie-cutter answers. IT managers must assess all factors in each availability study from scratch.


“Keep in mind that each availability design element or strategy has to be considered in the bigger picture of what ‘availability’ means to the particular client,” adds Hogan. “If the key metric is the availability of data applications to end users, then the organization providing the data applications has to use all of the design elements and IT

Key Points

- The four major approaches to achieving IT data availability are N+1, fault-tolerant hardware, clustering, and virtualization. Each approach has its own benefits and detriments.
- While it's difficult, if not impossible, to compare one availability approach against another, it is possible, and even preferable, to blend these approaches in order to reach an even higher degree of availability.
- System availability can be viewed as a multiple of component availability. Target higher component reliability in order to improve the larger system.

strategies available to them to meet the data application availability metric that meets their business need at the right price point and at the appropriate level of risk.”

Dowling urges IT managers to achieve enterprise availability through combining these approaches in a holistic availability design: “With networking components, use N+1 designs to build availability into your LAN, as with load-balancing firewalls, and into your WAN or Internet egress. For server components, use a multilayered approach to create resilience. This could be an N+1 cluster of hypervisor hosts to support your virtualized computational workloads.”

Ultimately, it may pay to think about a system or application as a critical chain of dependencies. Availability of the whole system can be determined by multiplying the availability of each link in that critical chain. To achieve 99.9% availability, for example, each link needs to have a much higher resilience—an extra “9” of availability, so to speak. In other words, to achieve 99.9% system availability, managers must aim for 99.99% component availability. To achieve this, redundancy is critical at each link in the chain, and each link in the chain needs its own availability design. 

Tier Requirements Summary

Illustrating the overlap between infrastructure and IT equipment availability, this table outlines the Uptime Institute’s recommended availability characteristics for the four main data center tiers.

	Tier I	Tier II	Tier III	Tier IV
Active capacity components to support IT load	N	N+1	N+1	N after any failure
Distribution paths	1	1	1 active and 1 alternate	2 simultaneously active
Concurrently maintainable	No	No	Yes	Yes
Fault tolerance (single event)	No	No	No	Yes
Compartmentalization	No	No	No	Yes
Continuous cooling (load density dependent)	*	*	*	Yes (Class A)

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FEATURE PACKAGE

Prepare For Enterprise Growth

Is your enterprise prepared for brighter days ahead? We talked with some industry insiders to come up with these tips for making sure your data center infrastructure is ready for growth.

Get Ready For Server Growth | 22

■ Enterprises are scouting for potential growth opportunities. But why is it important to prepare for growth from a server perspective?

Prepare For A Storage Explosion | 23

■ Even in the midst of a severe recession, storage requirements have not abated, so addressing storage needs is critical for enterprises that want to grow their business as the economy recovers.

Handle Increasing Networking Needs | 24

■ The two most important objectives when dealing with increased networking needs are using existing resources more efficiently and working more closely with outside networks

Prepare For Additional Troubleshooting | 24

■ Even with growth in the business, there is a way to mitigate problems in the data center, plan for IT scaling, and meet the challenge in a way that does not cause undo consternation.

Get Ready For Server Growth

A Change In Demand Requires Preparation & Strategic Planning

by Chris A. MacKinnon

WITH ENTERPRISE GROWTH comes the inevitable increase in demand on enterprise servers. Many experts are saying that the economy is in turnaround mode (or close to it), and because of this, small to mid-sized enterprises are scouting for potential growth opportunities. But why is it important to prepare for growth from a server perspective? And how can your enterprise prepare for this kind of growth?

Brian Fry, vice president of sales and marketing at RackForce (www.rackforce.com), says it's important to consider servers when

Consider The Preparation

So what should data center and IT managers be doing to prepare for enterprise growth when it comes to servers? Jack Pouchet, director of energy initiatives at Emerson Network Power (www.emerson.com), says enterprises should “virtualize, virtualize, and then virtualize some more.”

“That information should be put into business perspective so that it becomes clear what is going on and the amount of work that can be accomplished with the IT that is currently on hand.”

Adams says once managers know where they stand, they can use a capacity planning tool to predict how systems will respond to future business growth. “Such tools,” he says, “can simplify the effort required to accurately predict just when business growth will exceed available capacity.” Adams says a good capacity planning tool can also help managers to determine the least expensive and best performing configurations for meeting future business needs.

Consider The Changes

According to Fry, the kinds of changes that data center and IT managers can expect with today's growth include fully converged networks and cooling systems that are capable of handling much higher density and cold or hot aisle containment. He says newer data centers are engineered better (and twice as efficient) than data centers built in 2005. He notes, “Most enterprises (and their customers) want Tier III now, but to do this, the building must meet a number of criteria in power redundancy, plus be a single-story facility.”

Pouchet says you can actually get somewhat ahead of the curve and be prepared for unexpected growth at the same time by organizing existing IT equipment in zones or pods and identifying a zone or pod for future growth, where all new IT equipment must meet new efficiency standards, be optimized for the new power and cooling infrastructure associated with the zone, and perhaps include some degree of cooling containment and security.

From a power and cooling infrastructure perspective, Pouchet says you can expect to see increases in power density from consolidation, virtualization, and the introduction of new server platforms (especially blade servers). He says this will require greater coordination between IT and facilities to ensure the proper infrastructure is in place to support new IT deployments.

Key Points

- When preparing for server growth, the first step is to get a handle on current capacity. Get an accurate snapshot of what IT is doing and how much capacity is available.
- You can use capacity planning tools to predict how systems will respond to future business growth. These tools can help managers determine the least expensive and best performing configurations.
- Don't forget about unexpected growth, where risk comes into play. You can't compare the cost of increased capacity to damage that can happen if growth occurs without capacity upgrades.

preparing for enterprise growth because insufficient processing power equals inefficient IT, which severely limits growth. “Today, most enterprises are interested in scalable IT, but they lack the data center infrastructure to actually make it happen,” he says. “It is actually difficult to acquire physical servers quickly, and even if you can, there are all kinds of data center challenges to overcome to support them.”

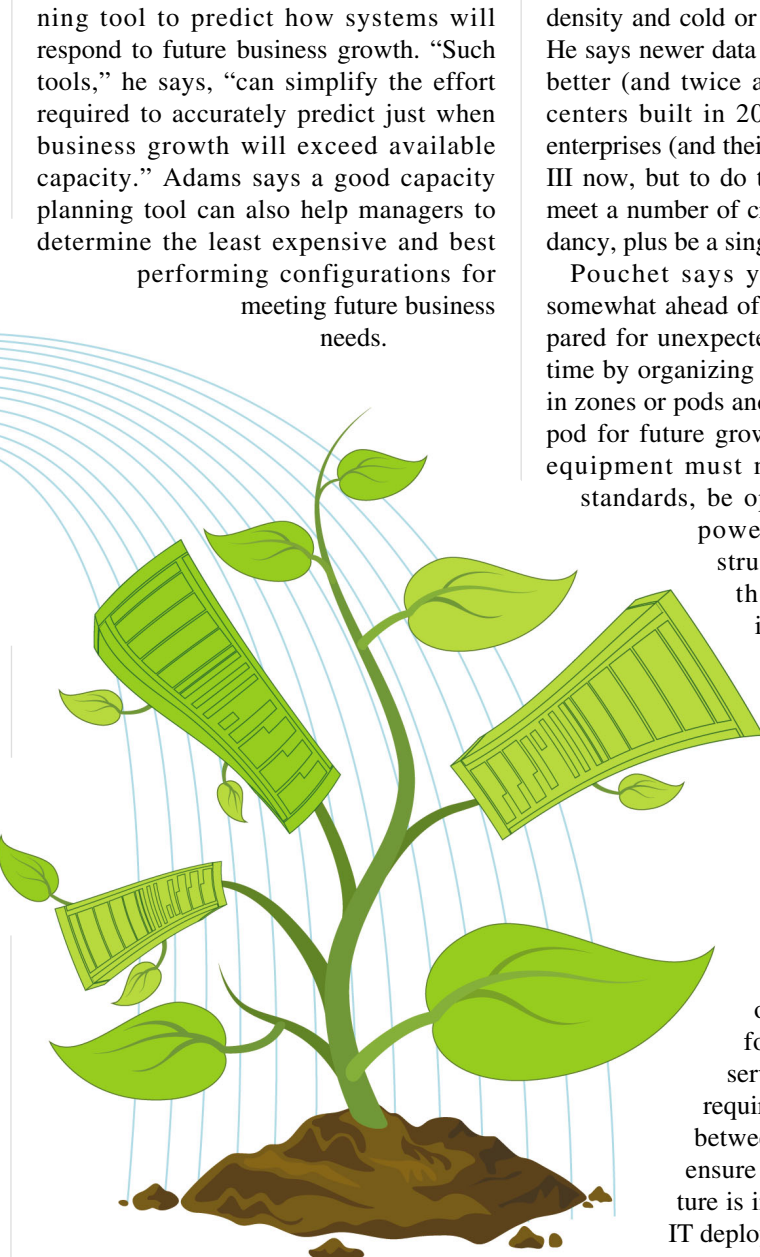
Scott Adams, director of product management at IT service optimization company TeamQuest (www.teamquest.com), says server consideration is important because many organizations are dependent on servers to deliver crucial services in support of key business processes. “For these organizations, when servers aren't performing well, business suffers,” he says. “Managing server capacity is important for maintaining their reputation and ensuring profitability.”

He continues, “Seriously, we need to examine the many paths to reducing the current IT load through server consolidation, application management, virtualization (where it makes sense), storage management (including data deduplication strategies), network optimization, and an often forgotten aspect of server management—removing obsolete, dead, or nonproductive servers from the data center.”

Pouchet says it's important to remember that as you perform server consolidation and virtualization, you should work with the facilities team to ensure that proper power and cooling will be available within the new “core” area, as collapsing the server and storage systems into a smaller footprint will change the dynamics of the data center infrastructure.

According to Peter Sacco, president of PTS Data Center Solutions (www.ptsdcs.com), data center and IT managers should create four-year replacement schedules to leverage improvements in performance vs. energy consumption. “Also,” he adds, “server utilization ratios and virtualization rates must become metrics that are measured and trended. Energy consumption is easy to track, even to the server level.” However, Sacco says the “holy grail” here is to weigh this metric against a meaningful performance metric. “But this is not easy,” he says, “especially when there are no industry standards in this area.”

The first step on the journey, in Adams' opinion, is to get a handle on current capacity. “Managers need accurate data on the work that is being done by IT and the amount of available capacity,” he says.



Top Tip: Consider The Cloud

Depending on what's expected (or unexpected), data center and IT manager strategies will vary. But according to Scott Adams, director of product management at TeamQuest (www.teamquest.com), one thing's for sure: Sudden or slow growth can both be accommodated with the same sort of capacity planning techniques and considerations, but unexpected growth is more of a challenge. “For unexpected growth,” Adams says, “risk becomes more of a factor. An organization needs to estimate the likelihood of unexpected growth. Then, the cost of increased capacity must be weighed against the damage that could ensue if the growth occurs without capacity upgrades.”

Adams says one option that is being considered by IT organizations is to allow peak workloads to be accommodated by tapping into cloud computing resources. He says this can be a way to avoid sizing internal systems to accommodate a level of growth that is most likely not going to happen. The downside, he says, is that cloud computing introduces a whole new set of risks and financial variables to the capacity management equation.

Prepare For A Storage Explosion

As The Economy Improves, Storage Demands Will Continue To Grow Unabated

by Sixto Ortiz Jr.

THE BURGEONING ECONOMIC RECOVERY means enterprises large and small must begin to plan for growth. One thing's for sure: Even in the midst of a severe recession, storage requirements have not abated, so addressing storage needs is critical

Key Points

- Enterprises must establish a storage capacity baseline, which, combined with a forecast for future growth, will help identify gaps and the technologies needed to close them.
- Software-based technologies such as virtualization, cloud computing, and SaaS will become more important in the years ahead.
- Enterprises must invest in technologies that are able to scale well in an unpredictable but rapid growth environment.

for enterprises that want to grow their business as the economy recovers.

Enterprises must carefully think about the storage options that will enable them to accommodate ever increasing data storage requirements. Strategies must be developed that not only take into account growth but also the rate of growth and the predictability—or unpredictability—of that growth. The fact that the recovery is beginning to pick up steam is encouraging; companies that likewise want to pick up steam must evaluate growth strategies for their enterprise storage systems.

Strategies For Growth

Without knowing where to start, it's impossible to determine an effective and efficient strategy for growth. A key to gaining that knowledge is determining current storage requirements, says Aaron Van Velsir, senior account executive at Abtech

Koka Sexton, manager of business development for Paragon Software Group (www.paragon-software.com), says administrators should be sure to use solutions that scale easily to growing storage demands. Consolidating free space with software can reduce new hardware expenses and maximize existing storage infrastructure, Sexton says; however, when new virtual machines or virtual storage is deployed, administrators should look for tools that can manage different virtual platforms.

Technologies For Growth

According to Berkeley's School of Management, more data will be stored in the next three years than in the previous 40,000, says Jason Collier, CTO and founder of Scale Computing (www.scalecomputing.com). In order to meet this challenge, administrators must consider the fact that scale-up architecture is outmoded and not well equipped to handle rapid data capacity consumption.

Collier says scale-out technologies, which were available in high-performance enterprise environments and priced at a premium, will now enjoy increased demand and phase out scale-up technologies. Also, says Collier, administrators should prepare for the dominance of commodity components used for previously specialized use cases such as data storage.

environments on servers, with a growing trend toward virtualization and cloud computing. Also, adds Sexton, administrators must plan for increasing processor loads and networking requirements and should aim to achieve a deeper understanding of virtual environments and how they can be utilized to manage server resources.

shared storage environments such as SAN and NAS, which have better management tools and reliability.

Calibrate Strategies To Growth

The effectiveness of a strategy is dependent on the type of growth expected in the business. Growth can be steady, but in most real-world cases, growth comes in spurts as business opportunities arise.

Allen Darnell, COO of iSeatz (www.i-seatz.com), a New Orleans-based travel technology company, points out that it is critical for companies to expect rapid growth and plan for it without oversizing the solution. Darnell points to SaaS offerings as examples of on-demand solutions that small companies can call upon so that they can scale up very quickly without incurring massive front-end costs. Because new companies today require these types of services, he adds, many are choosing this route instead of going with traditional data centers.

And how should administrators go about the difficult task of forecasting growth? According to Ken Barth, vice president of storage at SolarWinds, administrators should look at storage capacity and consumption to forecast future storage growth, combined with performance usage and trends along application, business unit, and SLA lines to choose the right type of storage for storage, process, policy, performance, and availability requirements.

Growth can be unpredictable, so administrators should calibrate their storage technology choices to prepare for such growth. Abtech's Van Velsir says companies that have very stable and predictable growth can get away with buying storage devices that have smaller footprints with relatively limited expandability. However, because the growth of storage can be quite rapid and/or unpredictable, he adds, it is much wiser for a business to invest in a solution that can be expanded to accommodate much larger storage requirements. Even though this approach may cost a little more up front, the business will enjoy benefits as the need for constant forklift upgrades is eliminated. ■

Administrators must plan for increasing processor loads and networking requirements and should aim to achieve a deeper understanding of virtual environments and how they can be utilized to manage server resources.

Systems (www.abtechsystems.com). Van Velsir recommends that administrators perform a trend analysis, which consists of current information plus any new applications, projects, and new users to be added. With this data, future growth patterns can be extrapolated; assuming a three- to five-year life expectancy for a storage array means administrators should develop total storage requirements for three to five years, says Van Velsir.

Enterprise growth requires scalability in the data center; with storage technology that doesn't scale well, enterprise growth will be, at best, difficult to manage. At worst, the lack of scalability could hinder business growth when it's needed most.

Virtualization is a technology that continues to garner a lot of attention, so administrators should keep their eyes on developments in this field. Joe Long, director of storage solutions for Logicalis (www.logicalis.com), says storage virtualization will mature to the point that storage becomes a true commodity, and storage management tools will enable utility pricing for storage so users can switch from a fixed-price cost model to a storage-as-a-service model. In other words, the much-predicted path toward the conversion of storage into a commodity-like service will continue.

Paragon's Sexton says IT managers must be prepared to manage larger storage

In the coming years, smaller companies will begin moving from direct-attached storage systems to external storage devices, says Abtech's Van Velsir. As organizations discover that managing direct-attached external disk arrays can get cumbersome, they will start looking at

Top Tip: Don't Rely On Hardware Purchases

According to Jason Burnett, director of network services at NeoSpire (www.neospire.net), it is not sufficient to merely "throw hardware" at the problem of enterprise growth. Administrators should plan carefully for both scalability and sustainability while considering facets such as green initiatives, virtualization, the ability to support new technologies, and the increasing need for performance and space.

FEATURE PACKAGE

Handle Increasing Networking Needs

Whether Networking Demands Increase Suddenly Or Gradually, IT Must Be Ready To Act Fast

by William Van Winkle

ALTHOUGH THE MARKET continues to be uncertain and news headlines have their fair share of gloom, one thing can't be argued: Recent growth in the networking market clearly shows that enterprises are investing in networking infrastructure and increasing capacity. This likely has little to do with supporting internal growth fueled by rising staff levels; rather, it seems that companies are increasing their networking in order to meet external demands, enable innovation, and remain competitive.

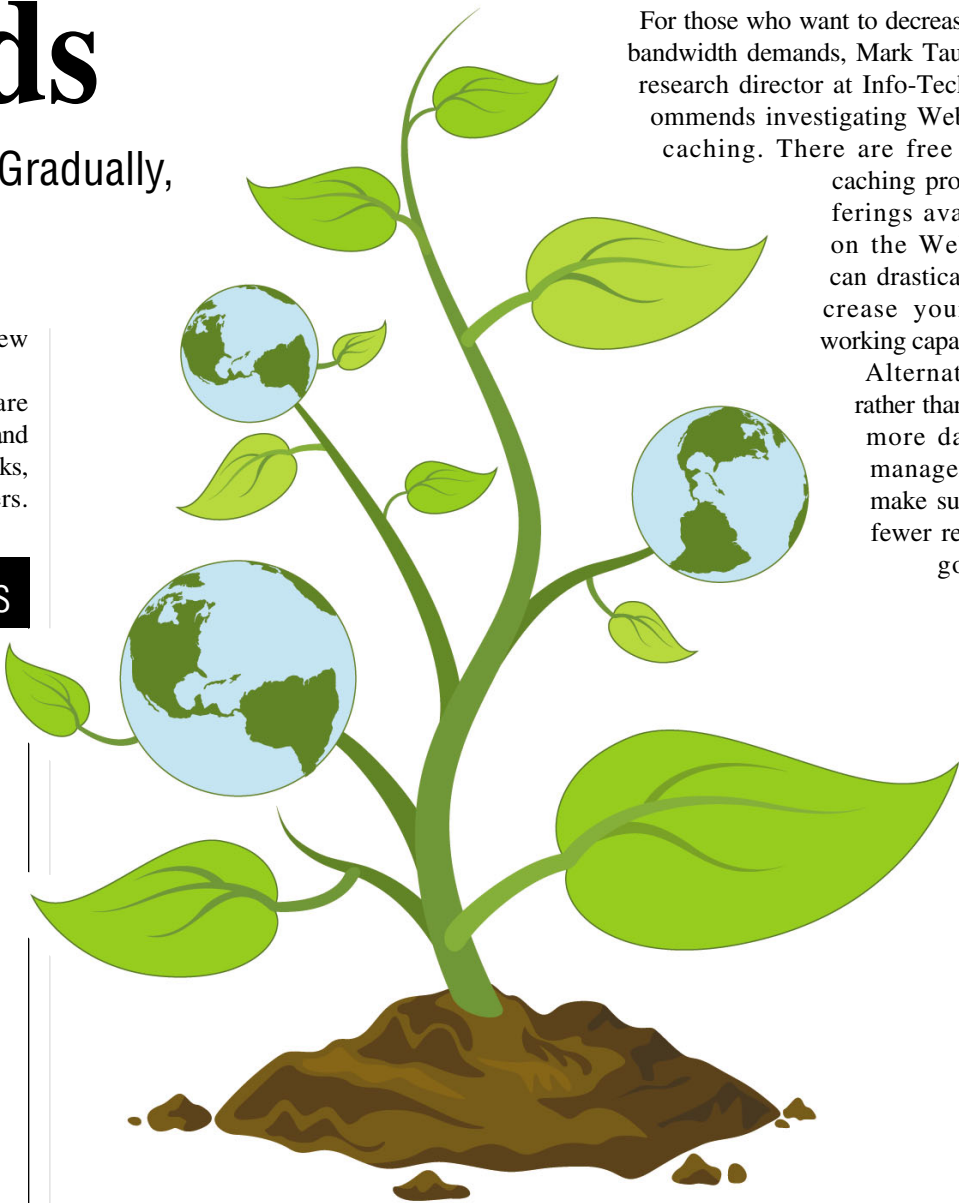
"There are several trends that are happening in SME data centers that should be of interest to every SME IT manager—for example, data center consolidation, virtualization, and cloud services," says Ronen Kenig, product marketing manager for Radware's Alteon Products (www.radwarealteon.com). "All of these trends are designed not only to reduce CAPEX and OPEX of SMEs on their own infrastructure in their own premises, but also to increase the flexibility and agility of the network infrastructure so it can react quickly to meet changing business

requirements, such as new services, new applications, and increased capacity."

The two most important objectives are using existing resources more efficiently and working more closely with outside networks, such as those offered by cloud providers.

Key Points

- Find more network bandwidth by reducing client loads, which can be accomplished through such measures as Web page caching and content/site filtering.
- Unified networking can ultimately conserve bandwidth and increase network efficiency, but it may require investing in 10 Gigabit Ethernet equipment across a large swath of the enterprise's LAN.
- The key to accommodating future capacity needs is to have a scalable infrastructure already in place, whether by "borrowing" bandwidth from one network service for another until more capacity can be brought online or by using pay-as-you-grow services.



After all, in the end, there are only two ways to increase available bandwidth: either reducing demand or adding capacity.

Dropping Demand

For those who want to decrease their bandwidth demands, Mark Tauschek, research director at Info-Tech, recommends investigating Web page caching. There are free Web-caching proxy offerings available on the Web that can drastically increase your networking capacity.

Alternatively, rather than bring more data in, managers can make sure that fewer requests go out.

Prepare For Additional Troubleshooting

As Your Company Grows, New Problems Can Arise

by John Brandon

GROWTH IN ANY ENTERPRISE is a good thing: It means the company is healthy, sales are clicking, and excitement is in the air. As with any positive change in life, however, there are unexpected challenges that arise, including new technical hurdles that can cause headaches for IT. Fortunately, even with growth in the business, there is a way to mitigate problems in the data center, plan for IT scaling, and meet the challenges in a way that does not cause undue consternation. Part of the answer is to have a growth plan in place, one that

you implement as a company grows. A second tactic is to move some services to the cloud, which can scale rapidly as you ramp up services.

"As any business grows, the number of servers tends to grow, as does the reliance on those servers," says Nick Cavalancia, vice president of Windows Management for ScriptLogic (www.scriptlogic.com), a server management company. "Terms like SLA are heard on a daily basis and focus changes from implementing cool technologies to supporting them and keeping them running."

Cavalancia says there is a two-pronged approach to troubleshooting growth issues in a small to midsized enterprise: The first approach is better monitoring of servers and other services, and the second is building an adequate response to those changes that are monitored. Cavalancia says IT departments should use their own expertise in managing a data center to manage growth.

Troubleshooting Growth Problems

The "problem" of growth is a bit hard to grasp. All growth is good, and better sales and expansion of the core business likely

means more resources and more funds to deal with IT expansion. Yet, according to Leon Thomas, president and CEO of consulting firm Jelecos, growth also means IT must ramp up in many different areas to meet the new demand. This includes such seemingly innocuous areas as cable management, heat dissipation for new servers,

power capacity in the data center and requirements for local utility companies, and compliance issues.

Thomas says the best strategies for dealing with this new growth are considering virtualization, developing new standards for documentation and other policies that govern use of IT services, surveying which service providers exist to help with the new growth, and analyzing IT best practices to make sure staff can deal with the unexpected growth and react accordingly.

He also notes that moving some IT services to the cloud can help a company in the middle of a quick growth period. However, Thomas says, the cloud is not necessarily a one-size-fits-all answer, and companies should be diligent about determining exactly which services need to grow, when they should grow, and

Top Tip: Don't Forget Security & Compliance Concerns

Security becomes a new concern when a company grows because IT starts offering new services such as remote access and branch office access, so it is important to develop policies now for the expected growth. "Establish a written security policy for all staff to follow," says Doug Blakey, president of WaterlooSecurity (www.watsec.com). "This describes the ground rules for things like email practices, hiring and firing policy, and information access. For an SME starting from appropriate boiler plates, this can be accomplished in a couple of hours."

As a company grows, there are also new regulations to follow and a greater need for offsite storage. Blakey advises, "IT managers should know that privacy legislation, such as the U.S. Patriot Act and Canada's PIPEDA, place obligations on SMEs to put in place measures such as encryption and network fortification to ensure the integrity of data and electronic records," especially as the company grows and needs to manage more data. "Failure to comply with the privacy regulations can result in an intrusive audit, financial penalty, and/or lawsuits from aggrieved parties," he says.

Key Points

- Develop better monitoring to understand how IT and the company are growing and establish a process for how to deal with the monitored growth.
- Consider the cloud as a stop-gap measure for expanding services.
- Look closely for more subtle growth problems such as cable management and new cooling needs.

Content filtering remains an old-fashioned but nonetheless effective solution. Few users on the network will have a business-oriented need for viewing video or engaging in social media. Most security suites will provide a way to block such content on a per-user basis and thus reduce the aggregate bandwidth load.

“Within the data center, regaining bandwidth can be trickier, especially if you have a lot of incoming requests. There are things you can do, but they cost money,” says Info-Tech’s Tauschek. “You can do application acceleration, which reduces bandwidth while accelerating Web apps. In getting the most out of existing capacity, virtualizing servers is a way to get more out of your bandwidth. Say you’ve got five servers with Gigabit Ethernet connections and aren’t using all of that bandwidth. If you virtualize those five onto one box and still fit within that one Gigabit pipe, then you’ve freed up four Gigabit feeds.”

Adding Capacity

Added capacity not only helps with continuing growth but can also help with containing expenses. Lee Ratliff, senior analyst at iSuppli, notes that unified networking is one of today’s top trends for improving network capacity. A unified network platform entails merging multiple network applications onto a single infrastructure. In particular, many enterprises are consolidating their storage-area networks with their local-area networks.

“You just run storage-area networking as a service on top of your regular LAN,” says Ratliff. “This is mainly due to [the] Fibre Channel over Ethernet protocol, running on 10 Gigabit Ethernet. This isn’t being widely deployed yet, probably

because of initial deployment costs, but it’s on a lot of people’s radar and is clearly going to happen. It’s something data center managers need to be aware of so they can avoid redundancy in networking equipment and resources.”

The biggest cost in implementing a unified networking platform will be in upgrading switches. Most of the Gigabit switches throughout the organization’s primary infrastructure will need to be replaced with a 10 Gigabit equivalent, and today those are far from cheap. Moreover, the unified networking platform may necessitate upgrades in other equipment, such as routers and client adapters. For example, if a workstation had a Gigabit Ethernet adapter and a 4Gb Fibre Channel adapter, these would likely need to be consolidated into a single 10 Gigabit Ethernet adapter.

The On-Demand Option

Of course, there’s no avoiding the fact that plenty of uncertainty remains in the market, so enterprise managers should continue to plan for multiple growth scenarios, both rapid and gradual. The key, according to research from Cisco’s Infrastructure and Borderless Networks group, is to implement an extensible framework that can quickly

accommodate scale and services as needed. A proper architecture should allow IT managers to evolve their networks, regardless of the pace or time horizon.

Ideally, IT will find itself with enough budget dollars to implement a more scalable architecture, but miracles can’t always happen overnight—or even in one quarter.

“If your head count increases unexpectedly and you need to increase capacity, you might be borrowing in the short term from your SAN and then paying it back in the next quarter as you get more budget,” says Info-Tech’s Tauschek. “But you need a flexible, scalable architecture to make that happen.”

Alteon’s Kenig points to on-demand, pay-as-you-grow offerings as a means for handling unexpected or sudden growth. “The network infrastructure of an organization should be designed to allow flexibility and on-demand scalability to better meet business growth and avoid expensive upgrade projects on a regular basis,” he says. “An interesting solution for this challenge is the on-demand approach [that enables] customers to purchase only what they need at the onset to meet their initial business needs but [lets them] scale as needed when faced with unexpected traffic spikes or increased growth.”

Top Tip: Implement A Network Management System

According to Mark Tauschek, research director at Info-Tech, any enterprise is “flying blind” without a network management system to help show it where network capacity and bandwidth problems are coming from. “With a network management system, you can see where you’re at [and] what apps are using the bandwidth, set alarms, etc.,” says Tauschek. “You can also extrapolate growth curves for infrastructure purchasing.”

There are plenty of fee-based network management systems available, but you can also find worthwhile open-source options on the Web.

when IT should start leveling off those services, as it is easy to expand and scale beyond what you need.

Thomas says the strategies for handling growth differ depending on the amount of resource capacity you want in reserve. “For example, a faster-growth company would purchase enough capacity to enable at least a year of growth support, depending on the systems and technology,” he says. With that in mind, admins should look at areas of potential growth and plan accordingly. “If there is a possibility of unexpected growth, a manager would want to model the scenarios,” he explains. “What if our bandwidth and storage requirements increased 4x next month? Could we handle it? What would it mean to our overall plan? Is the business aware of the capital expense and operating expense implications?”

Interestingly, this balancing act of ramping up services, but not to the point that they exceed the actual demand for services, is a process that requires continual analysis and good management, even in the midst of the new growth. Adding too many servers, for example, has an impact on the cooling requirements, space constraints, and overall management chores.

Other Challenges With Growth

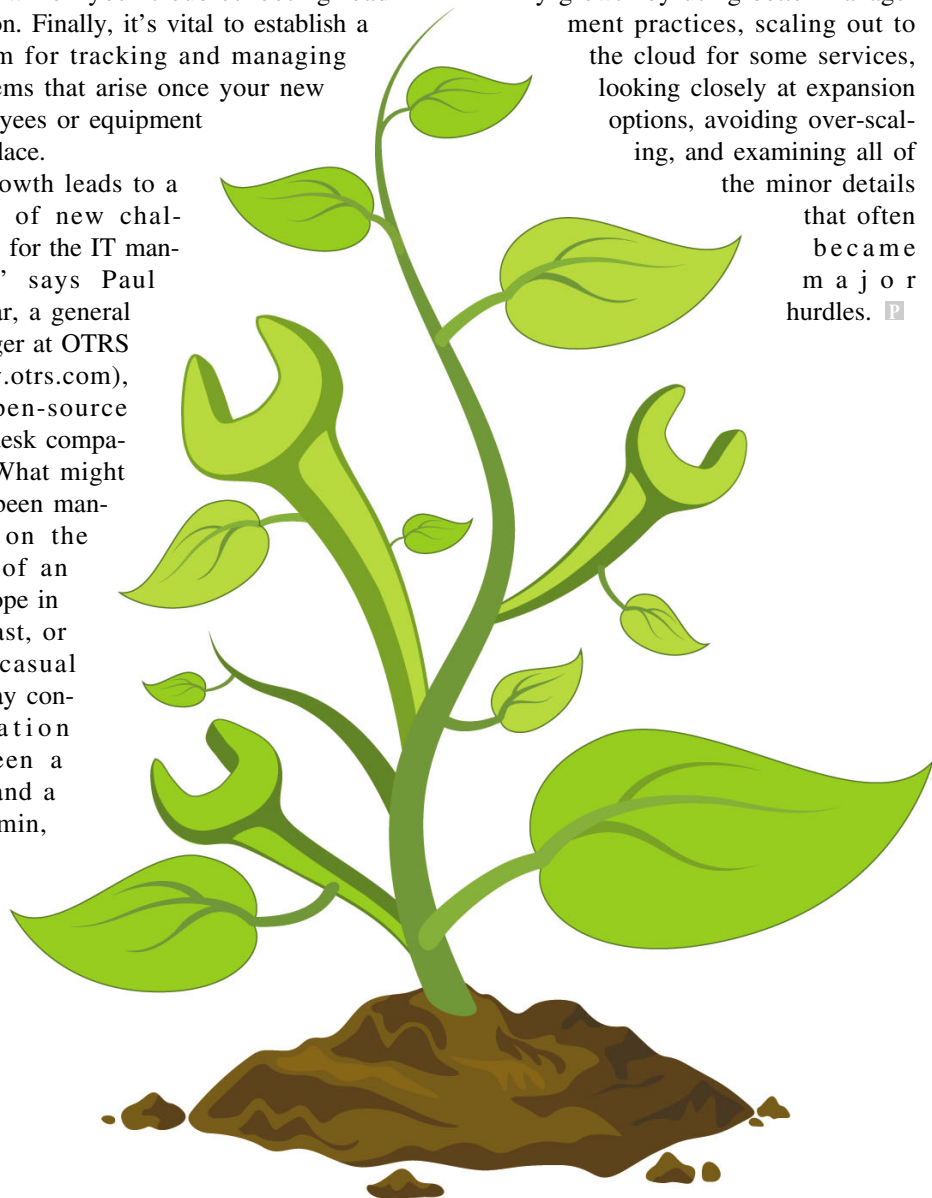
Growth presents a number of challenges to IT departments, chief among them being that there is simply more that needs managing—more equipment, more employees, and more security issues, to name a few. Even something as small as cable management can lead to problems down the line. Employee education is key

to making sure new systems and processes work properly, and performing extensive testing before deploying new solutions can cut down on your troubleshooting load later on. Finally, it’s vital to establish a system for tracking and managing problems that arise once your new employees or equipment is in place.

“Growth leads to a range of new challenges for the IT manager,” says Paul Salazar, a general manager at OTRS (www.otrs.com), an open-source help desk company. “What might have been managed on the back of an envelope in the past, or as a casual hallway conversation between a user and a sysadmin,

now requires a more formalized system of tracking and managing.”

In the end, IT can respond to company growth by using better management practices, scaling out to the cloud for some services, looking closely at expansion options, avoiding over-scaling, and examining all of the minor details that often became major hurdles.

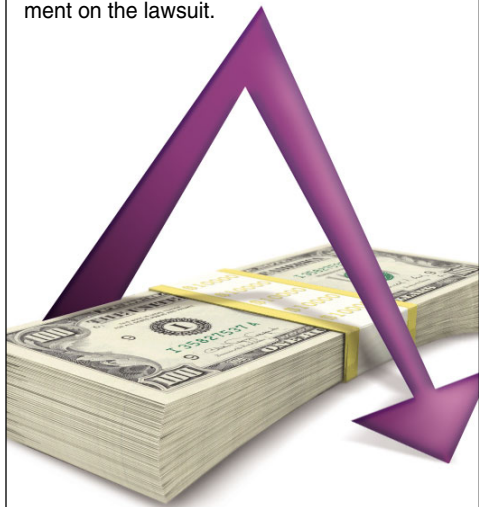


Vision Solutions To Acquire Double-Take

Vision Solutions, a disaster-recovery software manufacturer, says it plans to acquire Double-Take Software, a vendor of data protection, recovery, and replication software. The deal will allow Vision to buy Double-Take for \$242 million, which Double-Take’s board unanimously approved. That translates to about \$10.55 in cash per share, which caused concern among some of Double-Take’s shareholders. As a result, a New York-based law firm has already begun to sign up those with issues and begin a class-action shareholder lawsuit against Double-Take. Executives at Vision Solutions declined comment on the acquisition, citing SEC regulations.

Microsoft Files Suit Against Salesforce.com

Microsoft is suing Salesforce.com in the U.S. District Court in Seattle. The software company is alleging Salesforce.com, a software-as-a-service provider, violated nine Microsoft patents related to its CRM capabilities. However, the patents in question aren’t specifically tied to Microsoft’s CRM application, Microsoft Dynamics. Microsoft brought the suit, it says, because Salesforce.com has profited from Microsoft’s patents. Microsoft wants both temporary and permanent injunctions on Salesforce.com’s products, as well as monetary damages, including legal costs. Salesforce.com, which recently acquired Jigsaw, a contact-data vendor, reported \$1.3 billion in sales for 2009 and has yet to comment on the lawsuit.



Global IT Services See Drop In Revenue

Revenue from global IT services dropped 5.3% in 2009, according to Gartner. In 2008, Gartner reported \$805 billion in IT services revenues; in 2009, that amount dropped to \$763 billion. Among the top five IT services vendors, revenue at Accenture dropped 11.8% and HP dropped 10.4%, with IBM (6.6%) and CSC (6.5%) not far behind. Vendors based out of India showed 3.6% growth last year, compared to a 15.4% increase reported in 2008. Kathryn Hale, Gartner’s worldwide IT services group research vice president, attributes the drop to businesses that have shifted their emphasis from aggressive sales to strategies that maintain current revenue levels.

Security Guard Pleads Guilty To Hacking

Jesse William McGraw, a former night security guard, pled guilty to two felony counts of transmitting malicious code. The 25-year-old, known as “Ghost Exodus” in the hacker community, planned an attack at his place of employment, the North Central Medical Plaza in Dallas, Texas. He scheduled the DDoS attack on the hospital, including its HVAC system, for July 4, 2009. He was caught after posting videos on YouTube of himself planning the attack on the medical center’s computers. He has been in custody since his arrest last June and will face up to 20 years in prison for the crime.

Storage Encryption

Product	Addonics CipherChain ExpressCard	Check Point Abra	Check Point Full Disk Encryption
Description	<p>The Addonics CipherChain ExpressCard for notebooks securely encrypts data heading to your external hard drive or SSD on the fly. It doubles as a hardware token to decrypt the data you demand from the drive, letting you access your data without client software, a password, or biometric authentication. The upshot is that your external drive will be unreadable should it be stolen or misplaced. The CipherChain's data interface utilizes a fast eSATA hybrid port with a provision for USB power.</p> <ul style="list-style-type: none">• 256-bit AES full-disk encryption• Compatible with ExpressCard 34 or 54 slots• NIST- and CSE-certified encryption engine• Identical cipher key sets available for use with multiple devices <p>Best For: Users with a need to protect top-secret data.</p> <p>Price: \$89</p>	<p>The Check Point Abra is an encrypted SanDisk USB flash drive that turns a Windows computer into a secure, portable workspace with the user's desktop, application list, files, and email. It sports built-in VPN connectivity and Check Point virtualization and security features.</p> <ul style="list-style-type: none">• Hardware and software encryption• Program control regulates select application types• Virtualization technology isolates a work session from the host• Plug and play for ease of use <p>Best For: Users, contractors, and/or remote workers.</p> <p>Price: \$140 for 4GB; \$210 for 8GB</p>	<p>Automatic encryption of notebook and desktop hard drives protects critical information and prevents corporate data breaches. Check Point Full Disk Encryption provides a high level of data security with multifactor preboot authentication and strong encryption algorithms. The entire drive's contents, including the operating system and even temporary files, are automatically encrypted for a completely transparent end-user experience.</p> <ul style="list-style-type: none">• Safeguards corporate information from unauthorized access and data breaches• Centralized deployment, management, and logging simplifies administration• Security certifications include FIPS 140-2, Common Criteria EAL4, and BITS• Comprehensive platform support includes Windows 7, Mac OS X 10.6 (Snow Leopard), and Linux <p>Best For: Enterprises and organizations with mixed platforms.</p>
Contact	(408) 573-8580 www.addonics.com	(800) 429-4391 www.checkpoint.com	(800) 429-4391 www.checkpoint.com

Product	Hitachi Travelstar 7K500	PGP Portable	Proofpoint Archive
Description	<p>The Hitachi Travelstar 7K500 is a hard drive suitable for laptop use as well as server duty. It comes with optional hard drive-level and bulk data encryption, which is useful for immediately wiping the drive at the end of its life cycle. This Travelstar is designed to be both shock-tolerant and easy on battery life for mobile applications. Hitachi also touts its suitability for use in surveillance systems, routers, and more.</p> <ul style="list-style-type: none">• Compliant with the TCG Opal Storage Security specification• 7,200rpm rotational speed for performance• 2.5-inch form factor• Capacity range of 120 to 500GB <p>Best For: Businesses with a need for data security in notebooks, servers, and elsewhere.</p> <p>Price: \$159.99 for 500GB (estimated)</p>	<p>The idea underlying this PGP application is to enact portable software-based data encryption on any removable storage device, disc, or network share. After your IT department uses PGP Universal Server (sold separately) to create PGP Portable media, end users can access said media using a simple passphrase. This allows for easy sharing of protected data as well as read/write collaboration without requiring users to install any software.</p> <ul style="list-style-type: none">• Ideal for data sharing with users who do not have any PGP software• Create PGP Portable on Microsoft Windows using PGP software• In-place editing enables secure multiuser collaboration• Enables disaster recovery and forensics• Supports automation and provisioning <p>Best For: Midsized to large enterprises.</p> <p>Price: \$37 per user and up</p>	<p>Proofpoint Archive is a software-as-a-service solution that automatically captures email in a centralized, searchable repository for legal discovery, compliance, and mailbox storage management needs. Although Proofpoint manages the data, the archive is secured using the company's patented DoubleBlind Encryption process that ensures Proofpoint can never read it.</p> <ul style="list-style-type: none">• Automatically stubs large attachments and removes PST files• Provides fast search capabilities• Low price point• Rapid deployment <p>Best For: Medium-sized to large enterprises using Microsoft Exchange.</p> <p>Price: \$30 per user per year</p>
Contact	(800) 801-4618 www.hitachigst.com	(650) 319-9000 www.pgp.com	(408) 517-4710 www.proofpoint.com

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Marty Sems

Check Point Media Encryption



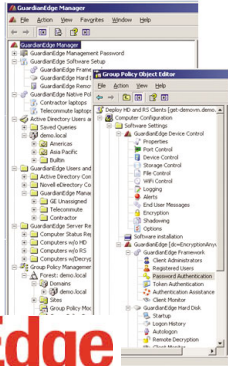
Check Point Media Encryption secures sensitive corporate data by encrypting removable media such as USB storage devices, CDs, and DVDs. It's a device and port control solution integrated with a single endpoint security agent. Media Encryption's aim is to simplify compliance efforts and reduce administrative overhead, according to the company. All device content is automatically encrypted in the background without impacting the user, Check Point says. No client installation is required for secure access to encrypted media on unmanaged computers.

- Supports Windows 7
- Blocks incoming malware
- Comprehensive control of endpoint ports and protection of corporate data stored on removable media and devices
- Seamless integration with Windows' CD/DVD wizard and Nero 9
- Simplified administration and operation with single agent installation, centralized management, and central policy enforcement
- Integrated endpoint and network security capabilities, including centralized logging of data movement and media usage for streamlined compliance and forensic analysis

Best For: Businesses with removable-storage security concerns.

(800) 429-4391
www.checkpoint.com

GuardianEdge Hard Disk Encryption



GuardianEdge

GuardianEdge says its Hard Disk Encryption reduces security management, implementation, and deployment costs by allowing organizations to leverage existing IT infrastructure. It natively integrates with Microsoft Active Directory, for which it features single console support along with Novell eDirectory and non-domain end points. It also can manage other GuardianEdge data protection products to simplify organization and facilitate administrator access to endpoint data protection.

- Provides strong protection for sensitive data
- FIPS 140-2 certified
- Supports 128- and 256-bit AES encryption

Best For: Enterprises and organizations of all sizes, including health care, government, financial services, and education.

(866) 277-7760
www.guardianedge.com

GuardianEdge Removable Storage Encryption



GuardianEdge

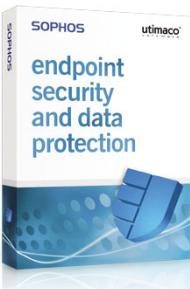
Removable storage devices can put businesses at risk of malware infection and data loss. GuardianEdge Removable Storage Encryption attempts to solve this problem by encrypting data by policy on any storage device or media. This capability lets employees safely transport and use data on portable media and securely distribute data via email. GuardianEdge says its technology also minimizes deployment, management, training, rollout, and support requirements by making maximum use of existing infrastructure.

- Supports USB flash drives, external hard drives, and CDs/DVDs in addition to other external storage devices such as MP3 players, phones, and cameras
- Works with GuardianEdge Device Control to monitor and control device usage for file transfer activity
- Applies policy-based encryption
- Combines support for Novell eDirectory and Microsoft Active Directory in one console
- Natively integrates with Active Directory

Best For: Enterprises and organizations of all sizes, including health care, government, financial services, and education.

(866) 277-7760
www.guardianedge.com

Sophos Endpoint Security & Data Protection 9.0



Sophos Endpoint Security and Data Protection offers a single integrated solution for both anti-malware and data protection. A sole agent delivers antivirus and antispware, a client firewall, data loss prevention content monitoring, management of removable storage devices, and detection and blocking of unauthorized software. Combined with integrated network access control and encryption to ensure policy compliance and secure your data, the product provides preventive endpoint and data protection to save you time, money, and resources. A single license means you can protect all users and computers across Windows, Mac, Linux, Unix, and other platforms.

- Can whitelist or blacklist VoIP, IM, P2P, and other applications
- 24/7/365 technical support included in price
- Offers compliance and user-based reports; reports can be customized and emailed to select recipients

Best For: Midmarket enterprises with 100 to 5,000 users or more.

Price: \$68.50 per user (500 users; three-year license)

(866) 866-2802
www.sophos.com

Sophos SafeGuard Easy 5.50

SOPHOS

Sophos SafeGuard Easy protects confidential data on laptop and desktop PCs with full-disk encryption for internal and external hard drives, and it does so easily and transparently, the company says. If a PC is lost or stolen, the encrypted data will be unreadable even if the hard drive is removed. In addition to protecting your sensitive data, SafeGuard Easy helps your business comply with data security regulations.

- Transparent full-disk encryption for laptops and desktops
- User-friendly power-on authentication, synced with single sign-on to the OS for added convenience
- Biometric authentication with Lenovo fingerprint readers
- Encryption compliance monitoring that is easily integrated with existing system management tools
- Recovery options for keys, data, and forgotten passwords, even when the help desk cannot be reached, to ensure that your operations can continue
- For centralized management, there's an upgrade path to Sophos' advanced data protection solution
- Advanced tech support options available

Best For: Midmarket enterprises with 100 to 5,000 users or more.

Price: \$50 per user (1,000 users for one year)

(866) 866-2802
www.sophos.com

Sophos SafeGuard Enterprise 5.5



SafeGuard Enterprise provides multilayered endpoint data security combining encryption and DLP. The centrally managed solution secures data on desktops, laptops, PDAs, smartphones, and removable media. Its transparent data encryption prevents malicious users from reading lost or stolen media, and it even enhances user productivity, according to Sophos. SafeGuard Enterprise protects confidential information from data breaches in accord with regulatory mandates. A modular information protection control solution, SafeGuard Enterprise enforces policy-based encryption for PCs and mobile devices across mixed environments.



- Prevents endpoint data leakage via wireless and physical interfaces and removable devices
- Central administration console
- Modular architecture to fit your organization's needs
- 24/7 tech support comes standard; advanced support options available

Best For: Midmarket to large enterprises with 100 to 5,000 users or more.

Price: \$60.25 per user (1,000 users for one year)

(866) 866-2802
www.sophos.com

Solid-State Drives

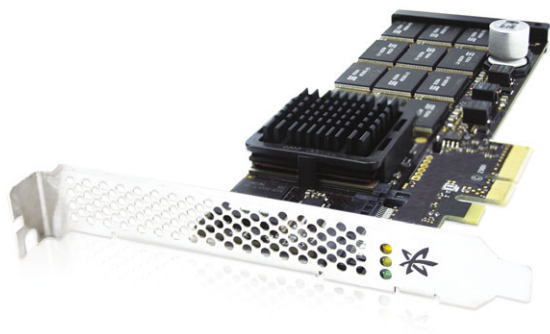
Product	BitMICRO Networks E-Disk Altima Series	Crucial RealSSD C300 2.5-inch SATA 6Gbps Drive
		
Description	<p>BitMICRO Networks' E-Disk Altima series is designed to offer the most advanced solid-state drive solution. Powered by BitMICRO's proprietary EDSA (Enhanced Datamover and Storage Accelerator) flash I/O controller and LUNETAs (Logical Unifier of Extensive Transfer Arrays) memory flash interface ASICs, E-Disk Altima SSDs utilize high-density flash memory chips to create massive storage capacities in standard disk drive form factors. Flash memory-based E-Disk Altima SSDs boost system performance by eliminating seek time and latency for faster I/O and sustained transfer rates. BitMICRO's E-Disk Altima SSDs are available in 2.5-inch PATA, 2.5-inch SATA, 2.5-inch SCSI Narrow, 3.5-inch Fibre Channel, and 3.5-inch Ultra320 SCSI interfaces. E-Disk Altima SSDs can support demanding enterprise applications with their patented FlashBus technology.</p> <ul style="list-style-type: none">• Available in a variety of capacities from a few gigabytes up to a terabyte• Use BitMICRO-built SD controllers and accelerators to maximize drive potential• Drives can be optionally equipped with PowerGuard, a power management system that can perform specific drive functions in the event of a power failure• Custom configurations available for customers who require highly specific SSDs• Drives are rugged and can withstand demanding conditions <p>Best For: Aerospace design, algorithmic trading, data warehousing, nuclear fission models, video on demand, and real-time data/feed processing.</p>	<p>With high-speed MLC NAND, advanced controller technology, optimized NAND management, and the new SATA 6Gbps interface, the Crucial RealSSD C300 is designed to deliver the latest innovations in solid-state storage to servers and workstations. The RealSSD C300 leverages Crucial's expertise in NAND process technology to optimize the performance and reliability of its solid-state storage devices.</p> <ul style="list-style-type: none">• 4,000 random read I/Ops, up to 60,000• SATA 6Gbps interface with Native Command Queuing to improve throughput and eliminate interface bottleneck• Fully implemented ATA-8 with Trim to improve data transfer speeds• Self-Monitoring Analysis and Reporting Technology command support <p>Best For: Storage needs where throughput performance, reliability, and quality are paramount.</p> <p>Price: \$399.99 (128GB) or \$699.99 (256GB)</p>
Contact	(510) 743-3475 www.bitmicro.com	(800) 336-8915 www.crucial.com

Product	Intel X25-E Extreme SATA Solid-State Drive	Intel X25-M Mainstream SATA Solid-State Drive
		
Description	<p>The Intel X25-E Extreme SATA Solid-State Drive, based on SLC (single-level cell) NAND memory, is designed for maximum I/Ops performance to accelerate data center responsiveness. Typical enterprise uses include replacing 15,000rpm HDDs in Tier 0 and Tier 1 storage applications in an effort to dramatically accelerate performance, lower power consumption, and reduce total cost of ownership. Intel's X25-E Extreme SATA SSD technology is designed to help change the economics of enterprise data centers by increasing server, workstation, and storage system performance by 100x compared to hard drives as measured in I/Ops. Intel's X25-E Extreme can also add a level of predictability through the use of SMART technology to help predetermine when to swap drives.</p> <ul style="list-style-type: none">• 14,000 read I/Ops per watt• Designed to lower the total cost of ownership for enterprise server and storage applications by more than five times compared to traditional spinning hard disk drives• Storage model designed to lower energy costs by up to 5x• Key architectural designs such as 10-channel NAND architecture with Native Command Queuing, proprietary controller, and firmware efficient in advanced wear-leveling and low write amplification <p>Best For: Enhancing enterprise data center responsiveness.</p>	<p>The Intel X25-M Mainstream SATA Solid-State Drive is a versatile SSD designed to meet corporate client requirements for notebooks. Additionally, the X25-M drives provide the performance and capacity to meet the needs of SME and corporate data center requirements for running read-intensive applications.</p> <p>Featuring an SSD on 34nm NAND flash memory manufacturing process, the X25-M is designed to provide responsive, lightweight, low-power, and fast-booting benefits of SSDs at a more affordable price. Delivering up to 6,600 4KB write I/Ops and up to 35,000 read I/Ops, the X25-M is designed to outpace other SSDs while significantly outperforming HDDs, providing faster system and application responsiveness.</p> <ul style="list-style-type: none">• Up to 6,600 4KB write I/Ops and 35,000 4KB read I/Ops• Designed to offer a 56% improvement in system responsiveness compared to a 5,400rpm HDD• Advanced algorithms and SSD utilities from Intel, including the Intel SSD Toolbox, which helps SSDs retain their out-of-box performance, and the Intel SSD Optimizer that supports the Trim command in Microsoft's Windows 7 operating system <p>Best For: Read-intensive applications for SMEs and corporate data centers.</p>
Contact	(408) 765-8080 www.intel.com	(408) 765-8080 www.intel.com

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Seth Colaner

Fusion-io ioDrive



Although it's technically not an SSD, the ioDrive from Fusion-io features solid-state storage technology designed to provide low latency, better application performance, increased bandwidth, and a simpler IT infrastructure. It also uses block storage-type management. The ioDrive has a write bandwidth of between 490 and 670Mbps and read bandwidth of between 700 and 750Mbps, depending on the capacity, and it also features up to 93,199 4KB write I/Ops and 119,790 4KB read I/Ops.

- Low-profile PCI Express x4 form factor
- Weighs less than 2 ounces
- Available in capacities of 80GB, 160GB, and 320GB
- Supports Microsoft Windows 64-bit XP, Vista, Server 2003, and Server 2008 as well as RHEL 4 and 5, SLES 10 and 11, and OEL v4 and 5

Best For: Enterprises and vertical markets such as Web 2.0 and social media implementations; banking and finance; and government, academic, or medical research.

(801) 424-5500
www.fusionio.com

Fusion-io ioDrive Duo



The Fusion-io ioDrive Duo offers the same technology and functionality as the ioDrive but with twice the performance and capacity. It has read and write bandwidth up to 1.5Gbps and 1.4Gbps, respectively, and has up to 129,699 4KB write I/Ops and 185,022 4KB read I/Ops.

- Full-height, half-length PCI Express 2.0 x4 or PCI Express x8 form factor
- Weighs less than 10 ounces
- Capacities of 320GB and 640GB
- Supports Microsoft Windows 64-bit XP, Vista, Server 2003, and Server 2008 as well as RHEL 4 and 5, SLES 10 and 11, and OEL v4 and 5

Best For: Enterprises and vertical markets such as Web 2.0 and social media implementations; banking and finance; and government, academic, or medical research.

(801) 424-5500
www.fusionio.com

Samsung 2.5-Inch Enterprise SSDs



Samsung's 2.5-Inch Enterprise SSDs offer 3Gbps SATA storage that enables highly reliable 24/7 performance in data centers and other server environments. Designed to provide a significantly higher degree of reliability than 15K SAS and Fibre Channel HDDs with dramatically reduced power requirements, these enterprise SSDs are performance-optimized SLC NAND-based storage devices. They're also designed to offer the highest performance in real-world enterprise workloads compared to traditional enterprise-class hard drives, and they consume 20% less power than a typical enterprise HDD. Average I/Ops speeds are 30,000/7,000 read/write I/Ops compared to 570 I/Ops for a 15,000rpm SAS HDD, and I/Ops per watt is about 22,000/17,000 read/write vs. 70 for a comparable HDD.

- Improved performance
- Higher reliability
- Better energy efficiency
- Improved total cost of ownership

Best For: A range of I/O applications such as video on demand, Web serving, virtualization, and OLTP.

(408) 544-4000
www.samsung.com

Solid Access Universal Solid State Disk Series



Solid Access' series of USSD (Universal Solid State Disk) drives are designed to reduce bottlenecks caused by high read/write traffic. A low-capacity USSD 200 appliance provides instant gains for OLTP applications suffering degradation because of high-volume traffic in tempdb, log files, indexes, and frequently accessed tables as well as entire high-performance databases.

The available drives in the USSD series are the USSD 200 for I/O-dense file traffic (16 to 128GB, 2U rackmount), USSD 315 (integrates server and SSD), USSD 310 for high-capacity density requirements (up to 256GB, 1U), and USSD 320 for interface expansion for high-volume data ingest requirements (up to 256GB, 2U). The units can also integrate with SAN switches to create larger storage volumes.

- Fast storage
- Instant application acceleration
- Requires no training, tuning, or periodic maintenance

Best For: OLTP applications with heavy traffic and high-performance databases.

Price: Entry-level pricing less than \$10,000

(603) 760-2831
www.solidaccess.com

FEATURED COMPANY

Cloud Storage Specialists

Nirvanix Works Hard To Ensure That Companies Have Secure, Fast Access To Their Hosted Storage

by Holly Dolezalek

STORAGE HAS ALWAYS presented a dilemma for IT managers: You can have cheap or accessible, but not both. Cheaper options such as tape offer barriers to access; more accessible methods don't come cheap. But as with many other functions, organizations are starting to be interested in how moving to the cloud might offer some savings and accessibility. Nirvanix hopes to capitalize on that interest.

Nirvanix (www.nirvanix.com) is a cloud storage company based in San Diego. Formed in 2007, the company has about 36 employees, most in the headquarters in San Diego and the rest in sales teams in Los Angeles, Cincinnati, Boston, and New York. Each sales team includes a direct salesperson, an account executive, and a solutions engineer who works with customers to figure out where cloud solutions in storage might fit in their infrastructures.

Cloud Offerings

The company's SDN (Storage Delivery Network) is a cloud storage service based on five nodes in Los Angeles; Houston; New Jersey; Frankfurt, Germany; and Tokyo. "The way it works is that customers get access via API to the

Nirvanix also has an application called CloudNAS. Customers get the software free once they sign on with Nirvanix, and it acts as a gateway or interface to the SDN. "CloudNAS turns any Linux or Windows server into a gateway to our SDN," Herrera explains. "It allows standards-based access so that organizations don't have to make extensive modifications,

in its capabilities is limited. "A lot of people say that large organizations aren't using cloud storage," Herrera says. "They are definitely using it. It isn't a mass market, but it's there."

Before, Herrera says, the common concern with cloud services was security—a concern that is frequently addressed by cloud providers. Herrera says the latest

Users of the Storage Delivery Network can also get Nirvanix's management portal, a Web-based tool that shows and reports on usage, billing, metering, and other factors.

they just point their existing applications or hardware to the gateway and use our cloud storage."

The company also offers professional services so that they can help customers figure out their cloud strategy or give guidance in integrating Nirvanix's API. But the majority, as much as 95%, of the company's revenue comes from sales of the SDN.

Selling The Cloud

Nirvanix's primary target is the Fortune 1000 company, but it serves its share of small companies, mostly through partners such as Cobalt and Symbana. For the most part, Herrera says, these companies are looking for offsite data protection for their disaster recovery plans. "When your speed is dependent on your bandwidth and you're going over the public Internet with a lot of data, daily backups aren't that easy to do," he explains. "But the cloud is good for archiving for smaller companies."

Altogether, Nirvanix has about 700 customers, which is a combination of customers that sign up directly for the service and large customers that provide the service to their own customers. Most of the company's business comes from large customers. Of all Nirvanix customers, about 35 to 40 are international.

Most of the company's sales, 80 to 90%, come from direct sales, although Nirvanix started developing its channel partners late last year. "We've got about 10 resellers right now because we're really selective about who we sign on," Herrera says.

Breaking Through

Nirvanix, like other cloud service providers, faces an uphill battle in explaining the value of its service. Although interest in the cloud remains high, sometimes trust

a hard drive, instead of including everything involved with managing storage," Herrera says. "So they look at dollars per gig and say, hey, I can buy a JBOD or a VPL for X cents per gig, but you cost 25 cents per gig. But they're not factoring in the power requirements, data center space, management, software, or the cost of new media down the line. They're also leaving out the values of cloud, in that it offers access to a global network and can optimize workflows and make offsite storage pools unnecessary because you can store in different locations."

New Developments

Nirvanix has begun offering a service that could be described as a hybrid managed node. It's a cloud storage node that Nirvanix installs in a few racks in the customer's data center and that runs Nirvanix's software. The company manages that node for the customer, including upgrades and expansions.

Some of Nirvanix's customers use this node as a replacement for FTP sites or other databases that aren't sufficient for the volume of content that needs to move on them. Interactive ad agencies that need to transfer large files to partners might use the storage node for that purpose, simply granting access to those partners. One customer, a networking company, uses it to store log files for customer support issues so that if one contact center has to pass an issue on to another center, the second center can access the log files on the storage site instead of using an FTP site.

"We're seeing a lot of momentum with that approach, because for some larger organizations, the storage decision is neither [a] public nor private decision but kind of both," Herrera explains. "Depending on the customer's compliance or business needs, they can have different policies for data, in that some has to stay inside the four walls, some can be on one application server, and some can be stored externally. This solution solves those issues for organizations." P

NIRVANIX

(619) 764-5650
www.nirvanix.com

- Nirvanix specializes in providing companies with cloud-based storage solutions.
- The company's Storage Delivery Network offers a secure hosted storage environment that is easily managed with its CloudNAS software.
- "[The CloudNAS software] allows standards-based access so that organizations don't have to make extensive modifications—they just point their existing applications or hardware to the gateway and use our cloud storage," says Adrian Herrera, Nirvanix's director of marketing.

network, and we support policy-based storage," says Adrian Herrera, director of marketing for Nirvanix. "So customers can specify which location they want their storage to go to or choose any number of nodes or just use our proprietary technology to figure out the best location for them."

Users of the SDN can also get Nirvanix's management portal, a Web-based tool that shows and reports on usage, billing, metering, and other factors.



Nirvanix's Cloud Offerings

CloudNAS	Free software component that turns any server on your network into a gateway for Nirvanix's Storage Delivery Network for fast, easy, and secure access to cloud-based storage.
Nirvanix Management Portal	Offers instant visibility into your cloud storage usage for granular control and modification of storage and bandwidth.
Storage Delivery Network	Provides managed cloud storage services through a network of five nodes that feature security measures such as automatic intrusion detection and monitoring, SSL support for data to and from the SDN, encryption support for data uploads, and password authentication.

THREE QUESTIONS

Solutions For A Virtual World

PHD Virtual Simplifies Backing Up & Restoring Virtual Machines

by Daniel P. Dern

• • •

HEADQUARTERED in Philadelphia, PHD Virtual Technologies (www.phdvirtual.com) offers data protection and data recovery for virtual machines through its flagship product PHD Virtual Backup (formerly esXpress 4.0).

PHD Virtual currently has more than 2,000 customers worldwide, and more than 30% of its sales come from outside the United States; its customers include EDS (now part of HP), IBM, and the U.S. Coast Guard. Thomas Charlton is PHD’s chairman and chief executive officer, and Jim Schrand is the company’s director of product management.

■ **What are the biggest IT-related issues facing today’s small to mid-sized enterprise?**

“Virtualization in general,” Charlton says. “As organizations scale their use of virtualization, the larger legacy backup vendors whose solutions are designed for a physical

world are having trouble adapting to work with virtualization technologies and virtualized environments. Operationally, backup products on external devices can have trouble meeting the backup window, and agent-based backup approaches can be expensive and be laborious to set up for each VM,” he explains.

“Customers are therefore caught in the middle,” Charlton says. “They don’t want to lose or significantly decrease virtualization’s cost savings by needing to spend more for additional backup hardware.”

■ **What should *Processor* readers know about your company’s products?**

“[PHD Virtual Backup] is used in smaller-sized organizations as well as large enterprises,” says Charlton. “Our esXpress software is purpose-built for virtualized

environments, [and version] 4.0 lets you do autonomous, fault-tolerant backup and restoration of an entire virtual environment in less time and at lower cost. And we support full, full delta, incremental, and deduplicated backups.”

“We run as a small virtual machine under the hypervisor, alongside the VMs to be backed up,” Schrand adds. “When a backup needs to be run, we spawn a Virtual Backup Appliance, [or] VBA, VM that runs alongside the other VMs. This means less impact on server performance and greater reliability compared to agent-based solutions that run in the host service. The VBA process goes away when done, freeing up resources. We can

coming out with PHD Virtual Backup for Citrix XenServer by September 2010. And we are planning to also support Microsoft Hyper-V and Oracle VM Server.”

On the restore side, PHD Virtual Backup/esXpress supports data verification at the target and self-healing of data on the target. “And we have a self-restore capability—you don’t need an esXpress license to restore your data to another machine,” says Schrand. “Plus we also allow instant file-level restore, [so] you don’t have to restore an entire VM image.”

■ **What makes your company unique?**

“Our focus is on virtualization backup,” Charlton says. “We were the first to market with a backup solution for VMware ESX and we will continue to lead the market with solutions for hypervisor players like Citrix XenServer, Oracle VM Server, and Microsoft Hyper-V. We offer global source-side deduplication, deduplicating before we send to the backup target.”

Also, says Charlton, “We are a fully U.S.-based organization, with development here as well as all other departments, although we have a very strong international presence through our partners. And although PHD Virtual is a small firm, we’re owned by a large private equity firm, Insight Venture Partners—this can be important to companies looking at longevity and financial strength regarding what vendors to go with.” ■



scale the number of VBAs up to 16 on a host and up to 16 simultaneous streams of data to a backup storage target. That means faster backups and scalability to still meet backup windows as your environment grows.”

“Our product family, PHD Virtual Backup, is a cross-platform solution, supporting the leading hypervisors,” says Charlton. “We support VMware Server, VMware’s View desktop virtualization product, and XenDesktop and will be

FEATURED PRODUCT

Instant Server Recovery

CMS Products BounceBack Server Keeps You Up & Running

by Kris Glaser Brambila

• • •

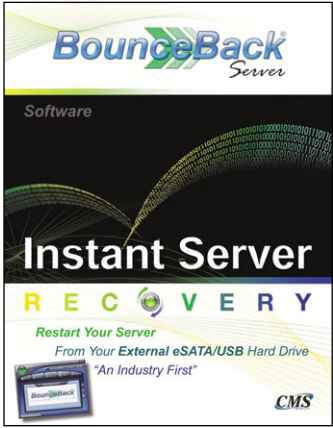
SERVER DOWNTIME can be a serious issue if you don’t have the right tools to help you get back on your feet. BounceBack Server from CMS Products can save your organization precious time by backing up your entire Windows server on an external eSATA or USB drive.

“Given that almost everything in a small business is handled through its computer system, [including] inventory records, point-of-sale transactions, accounting data, customer data, etc., having that system unavailable for use can have a very damaging effect on a business in terms of lost revenue and negative impact on their customers,” says Gary Streuter, vice president of marketing at CMS Products.

**CMS PRODUCTS
BOUNCEBACK SERVER**

(800) 327-5773
www.cmsproducts.com

Instant, one-button recovery to an external eSATA or USB drive to help avoid lengthy downtimes. \$285 (download); \$295 (CD/box); ABS-Server backup systems start at \$399

The CMS Products logo consists of the letters "CMS" in a large, bold, blue font, with the word "PRODUCTS" in a smaller, blue, sans-serif font underneath.

The BounceBack Server software, which you can purchase individually or installed on an ABS-Server drive with capacities ranging from 1TB to 4TB, offers a range of backup and restore options to fit the needs of any organization. For starters, the Instant Server Recovery option immediately restarts your server from your external backup drive. Instant Server Recovery “provides small-business users with the opportunity to keep their Windows Server business system up and running in the event of a hard drive failure,” Streuter says.

With BounceBack Server, you can recover your entire server to its last backed up state with One Button Recovery or use the QuickRestore tool to reinstate individual files and folders. You can customize which data you want to back up, choose multiple backup destinations, encrypt with 256-bit AES encryption, or store your server information on a local or mapped network drive. BounceBack Server also lets you schedule a date and time to perform an automatic, unattended backup.

DISKEEPER DISK PERFORMANCE ANALYZER FOR NETWORKS 3.0

NEW PRODUCT

by Kris Glaser Brambila

Detect Fragmentation On Network Drives

A NETWORK COMPOSED of computers filled with fragmentation can mean sluggish and unreliable operation, not to mention huge consequences when it’s time to defragment.

A screenshot of the Diskeeper Disk Performance Analyzer for Networks 3.0 software interface. The window shows a "Welcome to the Disk Report Wizard" dialog box with several tabs and options for generating a report. The background shows the main application window with various performance metrics and a tree view of network drives.

Diskeeper Corporation Disk Performance Analyzer for Networks 3.0 is a free utility that detects the level of fragmentation on your networked systems and offers detailed reports for system administrators. Once the report is evaluated, administrators can utilize Diskeeper® performance software to clean up their

networks by preventing fragmentation before it even occurs.

“The main feature is the ability to generate a report of the amount of fragmentation on all computers, regardless of whether the computers are running Diskeeper or not,” says Mark Harrer, systems engineer at Diskeeper. The report issued by Disk Performance Analyzer includes information about low-performing fragments, low-performing free space, performance gains because of defragmenting, and more.

Harrer says Disk Performance Analyzer is ideal for businesses of all sizes because it provides critical information about how fragmentation affects the performance of a computer and the network.

The Diskeeper utility’s ability to examine hard disk performance across the network sets it apart from other offerings. “A hard drive is a mechanical device, which is subject to failure and also the biggest performance bottleneck on a computer system,” says Harrer. Disk Performance Analyzer addresses this issue by reporting significant information about disk performance in relation to fragmentation. “From this analysis, one can determine how fragmented an individual drive or volume is as well as what the fragmentation issues may be.”



(800) 829-6468
www.diskeeper.com

Expect Big Increase In Hard Drive Shipments, IDC Says



The hard drive market will experience significant growth in the next four years, according to predictions released in IDC's Worldwide Hard Disk Drive 2010-2014 Forecast. Opportunities in the enterprise hard drive market are expected to expand, with sales rising above 2009 levels. According to IDC, 40.5 million hard drives were shipped in 2009. The research group anticipates unit shipments will grow 5.4% annually, and, by 2014, about 52.6 million hard drives are expected to ship. Not only will unit shipments increase, but the amount of available storage on such hard drives will grow, too.

According to IDC's John Rydning, research director of hard disk drives, the market changed last year with hard drive form factors that will address enterprise hardware needs today and in the future. Rydning says that for enterprise applications, more than 17.5 million terabytes were shipped worldwide last year. IDC expects this amount to grow at a 44% CAGR between 2009 and 2014.

"More terabytes will ship into enterprise applications over the next two years than the HDD industry shipped into data centers over the past 20 years," Rydning says. If IDC's forecast proves accurate, about 108 million terabytes will be shipped in 2014. And, as far as price per gigabyte for performance-optimized HDD storage, the company expects this figure to decline 25 to 30% each year.

HDD Capacity Boost

Rydning says that enterprise applications will consist of capacity-optimized hard drives rather than traditional enterprise-class hard drives. Although this transition may take some time, IDC's expectation is a far cry from the hard drive sales/shipments in 2009—a year in which hard drive OEMs worked through the recession and fought the popularity of solid-state drives. Rydning cautions, though, that cost-cutting measures, such as making current solutions more efficient, are still important in the enterprise.

According to Rydning, the significance of this forecast is the considerable volume of terabytes the hard drive industry will be shipping into enterprise data centers during the next five years. "Some of this capacity replaces old, existing installed storage capacity, but much of it is new storage capacity," he says. "There will always be a focus on the cost of acquiring storage hardware. The real challenge will lie more with the cost of ongoing storage management."

by Antona Beckman

A Single Point Of Entry

TriCipher's myOneLogin Lets Students Log In To Google Apps Privately & Securely

by Robyn Weisman

ST. MICHAEL'S RC School is a co-ed "Specialist School" for science in London. It teaches all subjects required for its 800 students, aged 11 through 16, to continue on to college, and its forte is in applied learning. "The students learn by doing rather than from a textbook," says Damien Kelly, head of e-learning at St. Michael's. About two years ago, the school migrated to Google Apps for its school workflow. In the past, students would complete work on Microsoft Word or Open Office, save it, print it, bring it to school, give it to the teacher, and then wait for the teacher

the school's network or having to write specialized scripts, both of which he wanted to avoid. "We don't want to be distracted by having another layer of [technology] that would distract us from our primary goal, which is to provide education," Kelly says. "We wanted something we could click and go to straight away." In contrast, myOneLogin was simple, not just in the way it meshed seamlessly with Google Apps but also in its flexibility of entry. The myOneLogin registration process is straightforward, Kelly explains. When a student clicks the hyperlink on St. Michael's Web site to access Google Apps, they are sent to myOneLogin

with secure SAML (Security Assertion Markup Language)-based integration with Google Apps as well as TACS (TriCipher Armored Credential System), an authentication system that lets the school deploy and administer different sorts of credentials from a single infrastructure.

Ease In Testing & Implementation

St. Michael's has used myOneLogin for several months and has yet to experience any downtime, connection problems, or other issues. But before it deployed myOneLogin across the entire school, Kelly conducted a trial using a selection of students and staff to test it out. "myOneLogin offers a trial thing so that particular students and teachers who are registered must go through myOneLogin, while the rest can carry on using [Google Apps] in the way that they have," Kelly says.

According to Kelly, the trial spanned a month without a single hitch. "Then we clicked a button and said, 'Now, everyone has to register to use Google Apps.' Students and staff knew that on a particular date, they would have to register to access Google Apps. It was as simple as that," he says. As for technical issues, Kelly says that he has yet to need any technical support from TriCipher. "Really, to integrate [myOneLogin] and make it work is so simple, you can do it in your sleep," he says.

What's more, myOneLogin is free for educational institutions using Google Apps. Kelly says he was not aware of this minor bonus until after he had chosen myOneLogin over competing solutions. "When we were looking for a solution, we decided we wanted the best solution for the school, not just a free solution," he says. "But because it is so good, in the future, when we want to use it with different companies or applications, we will only use myOneLogin because it makes sense to use one system where once you've logged in, you then click to which organization you want to connect to, and you just connect." ■



to mark it up. During this process, Kelly points out, too many glitches were possible—students could lose the flash drive carrying the homework, students often had to hold up their progression waiting for teachers' annotations, and those annotations could get lost in transit. With Google Apps, students now can seamlessly share their work with teachers and fellow students by accessing it all through the cloud. When a student finishes his or her homework, the teacher is alerted and can respond with the type of flexibility that facilitates learning. Google Apps, however, had one major flaw that kept it from being a complete solution for the school. "It had only one level of access—one password—and then you were straight in," Kelly says. It couldn't handle confidential information, such as that of a student's learning disability, so that the student's teacher could be informed of it in a confidential fashion. "We needed to find an easy way to add another layer that would be simple for the school to use without the complexity of having additional servers in the school or having to pay for the expertise to set it up," he says. After looking at several potential solutions, Kelly came across myOneLogin by online identity services provider TriCipher (www.myonelogin.com). "The biggest thing with myOneLogin is its simplicity," says Kelly. "It takes a click of a button to integrate into Google Apps, and then it just physically works."

The Right Solution For Students

The initial solutions Kelly checked out required either adding physical servers to

instead. If they aren't registered, myOneLogin tells them to register by inputting the same username and password they use with Google Apps. myOneLogin then integrates the two together and asks for additional information. Although some of St. Michael's staff provides VeriSign VIP (Virtual IP) mobile access information, which allows for one-time passwords on mobile devices, most teachers and all students select three questions and give three responses that they can remember to confirm their identities. This setup has worked well because even though St. Michael's students are intelligent and motivated, they're still between the ages of 11 and 16, with many more things on their minds than passwords. "Everyone forgets that if you have a large number of people working at an organization or students, a lot [of the time], they're going to forget passwords," says Kelly. The question-and-response option is a more reasonable and less time-consuming option for everyone. myOneLogin is successful because it allows individual students and teachers to log in directly, using the same username and password that they were already using for Google Apps, even though Kelly's small IT staff could have done so themselves ahead of time. "We decided it would reduce our workload if we got them to do it themselves, and for the students, it would provide a great educational understanding that this extra layer was giving them more security and making it less easy for other students to log on to their accounts," Kelly says. In addition to its ease of use, myOneLogin also provides St. Michael's

TriCipher myOneLogin

A cloud-based authentication solution that provides triple-strength security when logging in to applications while at the same time offering multiple means from which to access these applications.

"The biggest thing with myOneLogin is its simplicity. It takes a click of a button to integrate into Google Apps, and then it just physically works," says Damien Kelly, head of e-learning at St. Michael's RC School in London.

(650) 376-8326 | www.myonelogin.com

FEATURED PRODUCT

Flexibility & Spot Security

NetClarity's NACwalls Protect End Points & Block Access To Valuable Data

by John Brandon

FOR A SMALLER COMPANY, managing security is not easy. Without the vast resources of a large enterprise—including dedicated security personnel and extensive financial backing—it can be difficult to protect every end point, every router and switch, and every possible port from Internet attacks or a hacker running scripts out in the parking lot. NetClarity's NACwall line of products, including one that is particularly well-suited to a smaller company trying to protect corporate assets, is well-suited to protecting sensitive business documents, financial systems, and application data stores.

The Micro NACwall costs less than \$1,000 but provides a unique blend of enterprise-class security services. For an SME, the key benefit is flexibility. The portable device can be installed in retail locations to control access to routers and switches used at a branch office or even installed at the home offices of teleworkers and executives to provide security when those employees connect to corporate LANs.

"Micro NACwall is a low-heat, low-power portable appliance to protect a network of 10 users to keep criminals off of your network," says Gary Miliefsky, president and CTO of NetClarity (www.netclarity.net). "The moment it detects access, it will block the intrusion and alert you to the new danger."

Miliefsky says attacks are on the rise and companies should become more educated about new exploits. He suggests visiting www.privacyrights.org/ar/ChronDataBreaches.htm for the latest information about companies that have been attacked and explanations of how the hackers broke in. One recent example, he says, was in a hospital where doctors were using PDAs and laptops with wireless access. Hackers spoofed one of the devices and were able to download patient data. Another resource is Cybercrime.gov, where recent exploits are also listed with explanations of the attacks.

Security Challenges

In an age where Internet hacking runs rampant and criminals can freely download

Linux programs that are capable of breaking wireless security encryption and can install malware on the laptops of unsuspecting employees, the Micro NACwall goes well beyond the basic firewall protection



NetClarity offers three iterations of the NACwall—Micro, Branch, and Enterprise—to serve companies of all sizes.

of a router that may not be properly patched and capable of interpreting a new hacking technique.

For example, Miliefsky explains how in a small retail store, a hacker can spoof the barcode reader used for managing product inventory, replicate an IP address that looks valid, and then start stealing data. Or, inside a data center or small server room, anyone who has access—such as the building cleaning crew or a consultant—can easily



break into servers, but the Micro NACwall scans for any suspicious activity and can block access within 10ms. The device is easy to set up and configure, does not add a great amount of network load (as often happens with enterprise-class appliances), and can send an email alert if an intrusion is detected.

"This is a micro unit that can be plugged directly into a wireless network," says Miliefsky, who explains that the device is geared toward retail stores, home offices, and inside small data centers to provide flexibility in deployment. There is no specific chip inside the Micro NACwall for processing the firewall routines used to block access, so Miliefsky recommends upgrading to the Branch NACwall for those that need faster performance. The NACwall series of products all provide a similar feature set in terms of detecting intrusions, but the Branch NACwall has a faster CPU and more memory, so it has the ability to scan multiple threats at once and reroute them and block access accordingly.

The competition for the NACwall products is intense; some ambitious data center managers have figured out how to build custom firewalls and use open-source software to build security infrastructures. Yet, these techniques often require a serious investment in time. The NACwall products, conversely, are much easier to install and configure, taking just a few minutes. NetClarity also offers an enterprise-level appliance called the Enterprise NACwall that has even better performance and a software suite that allows managers to see how the network is protected.

Changing Landscape

Security is constantly changing, and hackers devise brand-new methods of stealing data seemingly on a weekly basis. Miliefsky says his company plans to keep improving the Micro NACwall and Branch

NACwall products to improve the quarantine engine, which detects intrusion and then reroutes that IP address to a dead end that cannot be used to damage corporate data, and will also improve performance in the products. NetClarity is also well-known as an OEM partner and plans to expand that side of the business, creating interfaces that can be used with third-party switches from companies such as Cisco. Miliefsky says the company is also focused on intellectual property for licensing the technology.

Security challenges exist for companies of all sizes, and the best plans can be thwarted by a dedicated hacker with a new technique. The NACwall products are designed to not just scan for intrusion attempts or block certain kinds of attacks but can scan for all suspicious activity, giving data center managers peace of mind and a new level of security protection. **P**

NETCLARITY MICRO NACWALL

(800) 874-2133
www.netclarity.net

Description: Portable security appliance for detecting attacks and blocking access to routers and switches in a small data center or server room, home office, or retail shop.

Interesting Fact: The Micro NACwall can detect and stop an intrusion within 10ms and send an immediate alert to IT staff by email or phone.

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NetClarity Micro NACwall Features

- Low-power, low-heat security appliance for small data centers
- Detects and stops intrusions within 10ms and sends email alerts
- Does not require any client software to be installed for protecting data
- Works well with existing networks, routers, and switches without need for upgrade

Google Estimates A \$54 Billion Impact On U.S. Economy

Google helped generate \$54 billion for the U.S. economy last year, according to a study released by the company. The Internet search service, along with Google-sponsored advertising, helped generate profit for many U.S. businesses, including Web site publishers and nonprofit organizations. In the report, the company details each state's economic activity generated by Google. California, New York, Florida, Illinois, and Texas make up the top five states that benefited most in 2009. Google calculated its economic impact using estimated figures of revenue made by advertisers, the value of free ad space given to nonprofits, and money paid to users of the Google AdSense product.

More Households Mobile-Phone-Only

Data from the Centers For Disease Control shows that 24.5% of U.S. households rely on a wireless phone only and do not subscribe to landline-based phone services. The CDC also shows that about 52 million adults (22.9%) live in households with only wireless phones. This represents a 4.3% increase compared to the last half of 2008; the numbers from 2008 showed a 4.4% increase compared to 2007. About 15% of households that had a landline also used a mobile phone a majority of the time. The CDC also reports that about 2% of households have no telephone service of any kind.



Telepresence Users Have Favorable Experience

Telepresence, or high-def videoconferencing that lets remote users feel as though they are speaking to one another in person, is popular with the businesses that have used it. Data from a study by TheInfoPro, a research and advisory firm for the IT industry, also shows that although about 70% of businesses report that they don't plan to use telepresence, 60% of those who have used the technology say they plan to rely on it more and broaden its coverage. About 13% of those surveyed say they will test drive telepresence by this time next year. Businesses that have given telepresence a green light say that the primary reason they like it is that it saves on travel costs. TheInfoPro also found that 41% of businesses currently use a unified communications system, with the remaining portion of the sample saying they either plan to roll out a unified communications system by the first quarter of 2011 (29%) or not at all (29%).

ICANN Hires Cryptography Trailblazer

About six months after departing from the roles of vice president, fellow, and chief security officer with Sun Microsystems, Whitfield Diffie has been tabbed by ICANN as its new vice president of information security and cryptography. Along with Martin Hellman, Diffie wrote the "New Directions in Cryptography" paper in 1976 that's credited with helping develop key distribution offering better security via the use of a private key exchanged between mutual parties before encryption. ICANN states that Diffie will provide advice on general security matters related to ICANN's mandate and in the design, development, and implementation of security methods for ICANN-managed networks. Additionally, he will oversee the "continuous improvement and 'best practices' process for information security and cryptography." ICANN CEO Rod Beckstrom says Diffie will bring "an extraordinary intellect and immense professional achievements to ICANN, and his appointment reflects my strong commitment to improving ICANN's technical security."

Proactive Counter-Hacking Security Solutions

Identify Risks & Threats, Develop Targeted Defenses

by Kurt Marko
• • •

IT HAS HISTORICALLY treated security like homeowners in a crime-riddled neighborhood who add so many dead bolts and window bars, their houses look like Fort Knox. The armored exterior looks safe but provides a false sense of security as clever burglars eventually find ways around the fortifications. Likewise, security professionals now realize that passive security measures are of limited effectiveness against professional hackers and their powerful financial incentives. Although "active defense" is a seeming oxymoron, as banks learned long ago,

toward protecting the most valuable assets." A strategic shift from blanket-edge security to targeted defenses is also recommended in a report by Deloitte's Center for Security and Privacy Solutions: "One of the more fruitful approaches to consider in addressing the threat of cyber-crime involves moving from a primarily security-based approach to a more risk-based approach."

Just as physical surveillance is the cornerstone of real-world security, so, too, is proactive monitoring of the IT infrastructure a requirement in the cyber world. Perhaps Mark Twain put it best when he wrote, "Put all your eggs in one basket and—watch that basket!" Sop recommends enterprises first deploy an anomaly detection system that benchmarks a network's normal behavior. He adds that this is increasingly difficult because sophisticated attacks now use various tricks to fly under the radar of conventional IDS systems. Carr agrees that professional attackers take pains to act in ways that avoid detection but aren't infallible. "Look for things like an employee that shouldn't be an administrator who now has administrator rights, or an employee who would normally be accessing a particular file or project a few times a week who is now in there an hour at a time every day."

Mount An Informed Defense

Having established an active monitoring regime, Carr says the next step is to gather intelligence on who might want what you have. This often comes down to someone looking for a competitive advantage by stealing intellectual property or secret plans. "For example, one of the priorities in China is the smart grid and developing cheap energy," says Carr, so, "if you happen to be in that business, then you can count on having your valuable information targeted by agents who think there's a market for what you have."

Deloitte's report describes intelligence gathering as a continuous scouting expedition using various sources for information about the threat environment,

whether industry groups such as the various CERTs (computer emergency response teams), law enforcement, or security vendors. Other techniques include creating honeypots to trap probable hackers or monitoring hacker forums, although this can be tricky because the black hats are vigilant in detecting poseurs.

Next, you'll want to use threat intelligence to develop an informed defense strategy, according to Carr. He likens this to a football coach using recordings of the opposing team in designing a game plan: "Once you know who you're dealing with, you can organize an appropriate defense."

The tactics often entail adding personnel or security services and enhancing procedures. "There is no silver bullet," says Prolexic's Sop; however, active, adaptive technologies are also making their way into new security appliances. David Koretz, president and CEO of Mykonos Software (www.mykonossoftware.com), says there's a gaping hole in the typical security measures for Web applications. Firewalls and client-side scanning only detect attacks after they've succeeded, he says. "It's equivalent to having a fire alarm after your house burns down," he adds.

Corporate Policies & Counterattacks

An aggressive security strategy should include risk analysis, threat intelligence, and an active, adaptive response to attacks, but a counterattack is clearly off-limits. "There is no right of self-defense," says Carr. "It would clearly be an illegal act and the Justice Department would be entitled to prosecute a U.S. company that engaged in attacking another network." As he summarizes in his book, active counterattacks on cyber criminals is the province of governments, not individuals or enterprises.

Even when attacks come from insiders, hacking the hacker is risky. And the question of whether digital employee surveillance violates the employee's right to privacy is also a legal gray area and is currently the subject of a Supreme Court case. [E]

Key Points

- Proactive security entails identifying your most important information assets and the security risks for each, gathering threat intelligence, and designing targeted defenses for each.
- Professional cybercriminals are skilled at evading conventional security measures, so a defense program must include continuous, active monitoring of sensitive applications, systems, and networks.
- Proactive measures center on people and processes; however, security software technologies are emerging that can detect threats and adapt their defenses in real time.
- A proactive strategy may prevent many attacks and render others less effective; however, counter-attacking the perpetrator is illegal cyber-vigilantism in most jurisdictions. Even putatively safe realms for counter-hacking or clandestine surveillance—on employees, for example—can be legally risky and a violation of corporate policies.

security is more effective when passive techniques, such as vaults, are supplemented with active measures such as security guards.

Of course, proactive measures are not cheap, can't be fully automated, and require research to find your highest risks and biggest threats. In addition, some techniques, such as white hat or ethical hacking, which mirror those of the hackers you're defending against, can pose ethical or legal risk. Yet, according to Paul Sop, CTO of Prolexic Technologies (www.prolexic.com), a network security services firm, anyone doing significant business over the Internet must augment traditional security techniques with more aggressive measures.

Start With Risk Analysis

A proactive strategy starts by identifying your digital crown jewels. According to Jeffrey Carr, security consultant and author of "Inside Cyber Warfare," "The first thing to do is an assessment of what's valuable. You clearly can't protect everything from everybody, so your resources, including financial, should be dedicated

Active Web Application Security Techniques

- Code-level modification and data protection:** Security appliances or proxies can inject a layer of confusion and misdirection into existing Web applications, making it harder for hackers to introspect and discover vulnerabilities.
- Identify and track hackers:** Pinpoint hackers and security incidents as the attack occurs and enable application administrators to track activities over time.
- Gain hacker intelligence:** Gain an understanding of hacker behavior using technology that profiles their capabilities, evaluates skill levels, and classifies the threat they pose.
- Establish counter-measures:** Once the skills of the hacker are classified, security administrators can decide on the appropriate response or counter-measures to deploy in real time. Counter-measures can also be defined and executed based on policy.
- Analyze attacks over time:** Drawing upon a database of known hacker behaviors and analysis of Web application attacks over time, gather intelligence to understand the real exposure and to better anticipate and prioritize responses against future attack scenarios. The more the hacker is understood, the better prepared an organization is to deal with future security incidents.

SOURCE: MYKONOS SOFTWARE

Email Account Migration In A Hybrid Environment

Mixing Cloud Email & On-Premises Servers Offers Flexibility, But Migrating Data Is Challenging

by Kurt Marko

CLOUD EMAIL, also known as Web mail, is the de facto standard for consumers, but the major providers are now taking aim at enterprise customers, and the ensuing price war has pushed annual subscriptions to as little as \$30 per user.

Despite potentially significant cost savings, many enterprises are unwilling to make the jump to online applications for something as critical as email. But there’s an incremental alternative allowing cautious companies to test cloud email while retaining internal servers for fastidious power users or security-conscious executives.

This hybrid model, which augments existing internal servers with online SaaS email, became popular in the last year largely as a cost control measure, says Ed Laczynski, CTO and founder of the cloud technology integrator LTech (www.ltech.com).

However, as businesses see the increasing power of cloud-based collaboration tools, many are considering moving more employees over. Burton analyst Bill Pray says tight budgets have forced IT to segment its user base, identifying light-use candidates for SaaS who just need basic email services and don’t require a fat client tethered to an internal mail server. Despite the seemingly best-of-both-worlds appeal, a hybrid email architecture comes with integration and migration challenges a homogeneous solution doesn’t face.

Hybrid Email Architecture

The hybrid model is conceptually simple: Some employees remain on an internal message server (typically Microsoft Exchange) and others move to a hosted email service (often also Exchange) or SaaS solution. Given the inherent transparency of Internet naming and email routing, SaaS users appear to have the same mail domain and corporate identity as their internal colleagues.

The primary advantage of a hybrid approach is the lower cost of providing email accounts via SaaS, where the vendors operate on such a scale they can offer rates most IT departments, particularly SMEs, can’t match. Other advantages, according to Info-Tech Associate Lead Research Analyst Tim Hickernell, include the transfer of operational risk to a third party, more robust disaster recovery capabilities, and better security.

Given these benefits, why keep any internal systems? The reasons boil down to risk mitigation and functional requirements.

Key Points

- Hybrid email architectures, in which some employees use a cloud service and others stay on internal systems, are an increasingly popular way of reducing email costs while preserving the features, control, and security needed for certain users and job categories.
- Hybrid environments aren’t static and necessitate the ability to move users and data bidirectionally between the cloud and on-premises systems. Thus, IT must transform migrations from an episodic project into a semi-automated process.
- Email transport is a standard, and users will see no difference in sending messages to colleagues on either service. But collaboration features are difficult to integrate across environments, although equivalent capabilities are typically available in the cloud.

There are two philosophies for segmenting email accounts: Make SaaS the default and only keep select users in-house or make SaaS the exception for transient employees or those with limited email needs.

In the first scenario, Laczynski says the primary driver for keeping users on-premises is compliance with government regulations. Many firms in the financial services, health-care, and defense industries (those most affected by regulatory regimes) find compliance with retention and storage requirements sufficiently arcane and are not comfortable entrusting the responsibility to a third party.

Overall risk tolerance and advanced feature requirements are other reasons Pray says companies retain internal email servers. Organizations using SaaS only in special situations often have many external salespeople, part-time workers, or multiple geographically dispersed offices, according to Hickernell.

Migration Issues & Feature Limitations

Historically, Pray says, email migrations have been episodic, major IT projects to move large groups of employees from one system to another. However, to fully exploit a hybrid environment, he says, enterprises must be able to “mix and match software and SaaS.”

A hybrid implementation cannot presume a static user population but must accommodate changing needs and job roles such that employees can shuttle back and forth between an internal system and online SaaS depending on their job assignments.

Such user account transience means migrations must be transformed from a project to a process. According to Pray, “Rather than big-bang migrations every several years, companies will continually migrate users and email data as they fine-tune who stays on the SaaS version and who stays on the software version.”

SaaS email vendors are most interested in moving users to their service and thus have a vested interest in providing migration tools that ease that transition. But these utilities seldom work in the reverse direction. Third parties have stepped into this breach with point products and migration services.

Although migrating user email, calendar, and contact data does present a challenge, Pray says moving user credentials to SaaS is relatively easy because most services can synchronize with corporate LDAP or Active Directory databases.

SaaS email has matured rapidly and now incorporates most features, including calendars, contact lists, instant messaging, and even voice integration, of enterprise mail systems. Unlike basic email, though,

these auxiliary collaboration features seldom integrate seamlessly with on-premises systems. The biggest missing piece is calendar free/busy viewing and scheduling. Cloud-based calendars can’t yet bridge the Exchange-SaaS boundary, but again, third parties offer solutions to fill this void. Other features Outlook/Exchange users might miss include shared or public folders, corporate address books, and integration with on-premises collaboration tools or social software. Here, too, there are third-party point products to plug many of these gaps.

Primary Motivation

Although cost controls have been the motivation for enterprises to consider SaaS email, Laczynski says customers are finding the associated online collaboration features an inviting by-product. As users discover how easy it is to search messages or documents and share information, he says, they often say, “This stuff just works better. So we’re starting to see use-case-driven cloud adoption.”

Because many companies will retain on-premises email, developing the tools and processes to automate user migrations between environments will be critical. Pray says fierce competition in the online email market could trigger SaaS providers to develop better tools, and he advises asking potential cloud vendors about support for bidirectional data migration before signing a contract. In the interim, look to the burgeoning ecosystem of third-party cloud integration services to assist in minimizing the pain of integrating external services into the corporate IT portfolio. [P](#)

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Dynamic Email Migration Guidance Framework

In order to create the dynamic migration process, an enterprise must methodically create and move through the following phases: Pre-work, Process Creation, Testing and Pilot Runs, and Ongoing Follow-up. Pre-work starts with understanding the email solutions and environment, going on to identify migration technology options. The next step is to create an email migration process that can be repeated and refined as necessary to achieve easy and inexpensive migrations of varying sizes. The initial creation of the process is aided by testing the process and using a pilot run to identify any major issues. Training is also important to bring the personnel involved in the process up to speed. Finally, measure and refine the process and work to make email migration replicable, fast, easy, and inexpensive.

SOURCE: “EMAIL MIGRATION: HOW TO MOVE WITH AGILITY”; BURTON GROUP RESEARCH REPORT BY BILL PRAY; DEC. 22, 2009.

FEATURED COMPANY

Comprehensive Email Security

Vircom Covers All The Bases For Protecting Your Company From Email-Borne Malware

by Robyn Weisman

WHEN MONTRÉAL-BASED email security solutions provider Vircom opened its doors in 1994, it specialized in designing software that let people dial in to and access bulletin board systems. But as the Internet began its ascendancy in the mid-1990s, Vircom switched its sights to email security. “Back in 1997 and 1998, spam started appearing, and our founder, Sylvain Durocher, made us one of the first players to address this security problem,” says Damien Ramé, Vircom’s

- as Nigerian bank scams and other oddly worded requests
- Policy management and custom filters that can easily be scripted and integrated using Sieve mail filtering language
 - Vircom’s proprietary Sequential Content Analyzer, an advanced artificial intelligence engine that can suss out everything from image spam to misleading URLs that the other layers might miss

Ramé points out that these multiple layers of configuration provide flexibility

to SMEs, can process as many as 5 million incoming email messages per day, while its top-of-the-line mBlade, used by many ISPs, can handle an average of 17 million incoming emails per day.

All modusGate gateways integrate seamlessly with Microsoft Exchange, IBM Lotus Domino, or generic SMTP servers. “A company email stream might contain 90% spam, malware, or other electronic threats, so that out of 100 potential emails, you get only 10 actually hitting Exchange server,” Ramé says. “It makes a difference in the amount of processing your server has to perform.”

Vircom also offers modusGate VM, which lets administrators install the solution directly on their own hardware with the same type of results that its physical counterparts can achieve. “One of the things that makes us attractive [to potential customers] is that we don’t force people into buying a hardware solution,” Ramé says. “You can buy software as is and install it on existing servers that you have, which can lower costs compared to hardware-only solutions, as well as offer flexibility. Many companies already have their servers and their blades in their [data center] and don’t want to add a superfluous box.”

Vircom will soon be releasing a new version of modus and new iterations of all of its products. The company will also be launching its new Email Policy Management module, about which Ramé is excited. “The goal of the module is to provide complete inbound and outbound enforcement of email policies,” says Ramé. He explains that this module will examine every inbound and outbound email and apply sets of rules so that, for example, any email from the HR department that includes a Social Security number can be automatically corralled into a moderation queue to be checked. Given the number of well-publicized

leakages of personal data, this new module provides yet another layer of protection that most companies require to safely run their businesses.

Technical Expertise Baked In

Although Vircom’s primary business is email security solutions, Ramé says that the company is at the same time employee-oriented. “Vircom defines itself by the



marketing manager. “Email security defines us to this day.”

Vircom (www.vircom.com) has more than 2,500 customers from a wide range of industries, including Match.com, Remington Arms Company, Goya Foods, Pitney Bowes, and the Philadelphia Phillies. According to a recent case study, more than 70% of Remington’s email traffic consisted of spam, and the company was unable to stop a rash of virus outbreaks. Remington, a classic SME, purchased Vircom’s modusGate appliance with a 1,000-user license. Spam disappeared almost from the moment Vircom’s support engineers implemented and configured the appliance for Remington’s needs.

Email Security Leader

Vircom’s proprietary modus technology provides a comprehensive approach to scanning email for viruses, worms, spam, and other threats. Every incoming email passes through modus’ Multi-Layer Spam Scanning engine, which includes a number of powerful safeguards:

- Connection-based Sender Reputation System, which is reactive to spam waves and provides the ability to check the reputation of IP addresses
- Forbidden attachment blocking, which lets IT managers automatically block targeted attachments such as those with the .EXE suffix
- Malware protection from McAfee, Norton, or a combination of both anti-virus engines
- Trusted and blocked sender policies that execute an array of whitelist- and blacklist-related actions
- Spam, phishing, and foreign-language filtering, which eliminates such attacks

for a variety of infrastructures. “They are configurable starting at [the system level], to the domain settings, the department settings, user settings, and so forth,” he says. “You can have several domains hosted on a specific mail server and another set of domains on another server, and each of these domains may have different settings.”

The granularity that the modus technology offers allows for a variety of scenarios. For example, a company’s marketing department can be set up to have a more aggressive spam filtering scheme that sifts out emails with certain keywords—a setup that may not be warranted for, say, the accounting department.

Additionally, modus technology provides the foundation of all the products that Vircom sells. “IT administrators need a solution that works so great that for the most part, they can install it and then forget about it, and modus was developed to address everything to make an email environment secure,” says Ramé.

Flexible Solutions

Vircom offers two primary product lines, both of which are designed for Windows environments. The first is modusMail, an all-in-one antispam mail server that gives data center managers just about every tool they need for safe email handling. This high-performance solution comes with an easy-to-use end-user GUI, full message encryption, access control, and comprehensive reporting and compliance tools as well as modus’ antispam and antivirus technologies.

The modusGate antispam appliances are a collection of email gateways that come as either physical appliances or virtual machines. The physical version comes in three sizes. The midrange M150, targeted

VIRCOM

(888) 484-7266
www.vircom.com

- Vircom specializes in email security products, such as its modusGate anti-malware gateway and its modusMail antispam email server.
- The company will soon release a policy management module to aid in regulating incoming and outgoing email.
- “IT administrators need a solution that works so great that for the most part, they can install it and then forget about it, and modus was developed to address everything to make an email environment secure,” says Damien Ramé, Vircom’s marketing manager.

technical expertise behind email security and antispam technologies, and we’re very oriented toward our employees [because] most of the people in our company are technical people—geeks, gurus, and so forth. They thrive on the challenges brought about by these problems,” Ramé says, adding that the company’s service and support department regularly helps customers set up their IT infrastructures to maximize the effectiveness of its solutions and provides three levels of tech support plans. ■

Vircom Featured Products

Product	Description
modusGate Antispam Appliance	Specialized email security gateway that protects against viruses, spam, phishing, and other malicious attacks while relieving the primary email server from having to process these messages.
modusGate VM	Offers same features as the modusGate antispam appliance in a virtual machine.
modus Email Policy Management	Policy management module that lets administrators set up and configure policies and rule sets for inbound and outbound email.
modusMail	Integrated antispam email server that blocks threats at network and content levels and provides granular security and access control for inbound and outbound email.

Windows Phone 7: What Should Enterprises Expect?

The Good, The Bad & The Unknown

by Brian Hodge

IN MID-FEBRUARY, Microsoft previewed its next mobile operating system, Windows Phone 7. Although the new OS isn’t scheduled for release until late 2010 and could further evolve by then, WP7 appears at first glance to be targeted toward a young, media-hungry demographic inclined toward social networking.

Key Points

- Windows Phone 7 will offer an improved interface, ActiveSync, and the ability to work with Office files stored on the phone and synchronized through SharePoint.
- Because WP7 is an entirely new platform, it won’t run previous Windows Mobile applications.
- Microsoft may be betting their future enterprise success on businesses moving to cloud-based application environments.

Early reactions across the business community have been tepid because of the platform’s incompatibility with whatever productivity applications companies may currently be using under Windows Mobile. Understanding what this new OS may mean to your company will give you a head start on deciding whether it’s a deal-breaker or a game-changer.

So Far, So Good

On the plus side, WP7 looks far more appealing and easier to use than its predecessors, with large tiles instead of small icons and touchscreen scrolling and panning. An Office Hub will let users work with Word documents, Excel spreadsheets, and PowerPoint presentations, whether they’re stored on the phone or synchronized with a SharePoint server, and email shouldn’t miss a beat. “It will have ActiveSync, so you will be able to connect up with Exchange,” says Jack Gold, founder and principal analyst at J.Gold Associates. “Although, I asked them specifically about things like encryption, and they didn’t clearly define it, so that’s an issue from a security perspective. But it looks like it will be able to do some level of encryption, some level of device kill, like the old days. So that’s all good.” Beyond this, anyone expecting a smooth transition from Windows Mobile may be in for a rude awakening. Rather than being a refresh of previous Windows Mobile versions, WP7 is a totally new platform, intended to reverse Microsoft’s declining share of the mobile market. “One of the big knocks against WinMo predecessor versions is that it’s an interface that needs quite a bit of help,” says William

Stofega, program director of mobile device technology and trends at IDC. “The philosophy going forward was: ‘Part of the reason that the OS and the UI experience were so bad in earlier versions was because we let it get that way.’ So they look at success models in terms of vertically integrated hardware and software.” This reboot means that business applications written for earlier Windows Mobile versions won’t run on WP7, and it would be risky to assume their developers will automatically release new versions. “They’re basically up a creek without a paddle when WP7 comes out, because they’ll either have to abandon or rearchitect,” Gold says. “My guess is most companies would abandon and choose a different platform rather than port to WP7.”

Hardware & Control Issues

Microsoft is imposing stringent hardware requirements on manufacturers intending to make phones running WP7, including a minimum 1GHz CPU, GPS, and a 5MP camera. Existing Windows Mobile phones that don’t meet the guidelines will not be upgradeable. Although that’s crystal clear, what isn’t clear at this point is how easy WP7 will make it for IT to exercise control over company phones. After all, many new features that Microsoft has been promoting, such as Facebook, access to Xbox Live, and streaming Netflix movies to the phone, could be regarded as distractions or security risks. Gold thinks it’s likely that IT will be allowed to disable these. “[WP7] will have a full implementation of ActiveX, and

Windows Phone 7: Nothing Is Set In Stone

Devices running WP7 won’t appear for several months, so it’s possible that what now appear to be issues for business use will be addressed. “In the mobile device world, it’s even faster than pop music in terms of trends and handsets and everything else, so I think there’ll be something there to take up the slack,” says William Stofega, program director of mobile device technology and trends at IDC.

What users shouldn’t expect, however, are multiple versions of WP7, with a separate version for business. Microsoft shortened the platform’s original name, Windows Phone 7 Series, precisely because it gave that erroneous impression. “They could decide there are some things that don’t work very well and pull them out. Microsoft has certainly done that in the past,” says Jack Gold, founder and principal analyst at J.Gold Associates. “We’re going to have to wait and see. All bets are off at this point.”

ActiveX does allow certain policies to be set. I think the intent is to offer some level of capability to turn things on and off.” Then there’s the matter of deploying applications. So far, the only way of

provision for traditional app deployment, it may be that Microsoft is looking to push a different mobile model altogether. **Head In The Clouds?** Business is increasingly moving from company-issued phones to having employees buy their own, within constraints, which are then connected to the network. Gold thinks Microsoft is betting on these users. Although this scenario precludes companies from heavily using on-device application clients, again, this may not be Microsoft’s ultimate vision. “I think what Microsoft is relying on is that more companies will move to cloud-based application environments,” Gold says. “If that’s the case, then the OS becomes less relevant, and what becomes relevant is the browser, because that’s where the cloud computing stuff runs.” Thus, the real WP7 issue facing your company may be less about a phone and

Rather than being a refresh of previous Windows Mobile versions, WP7 is a totally new platform, intended to reverse Microsoft’s declining share of the mobile market.

getting apps onto phones that Microsoft has accounted for is going through their Marketplace app store. Although it seems logical they would eventually unveil a

what it can support and more about running productivity apps through WP7’s version of Internet Explorer. The next few months will tell the tale. **P**

CLERITY UNIKIX 11.2

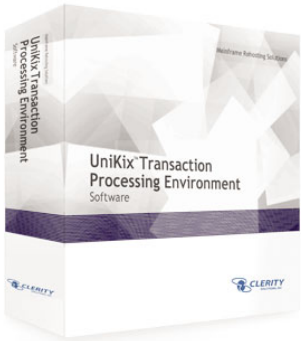
NEW PRODUCT

by Marty Sems

Mainframe Rehosting Software That Modernizes, Simplifies, Reduces Costs

IN THE DAWN of the new decade, it’s only fitting that there’s an updated way to wean your data center off expensive mainframe hardware. Clerity’s new version 11.2 of its rehosting software UniKix comes with a variety of enhancements based on feedback from the more than 1,300 sites in its global installed base. At its heart, UniKix gives legacy applications and data a place on open systems running Linux, Unix, Windows, or Linux on System z. Not a mere software vendor, Clerity also provides a full range of accompanying services, such as support for scheduling, job accounting, print and system management, source/change control, and more. Among the new improvements in UniKix 11.2 are items that concern JCL in the data center. JCL batch jobs can now be submitted dynamically thanks to assistance from a newly available advanced preprocessing feature. Control-M

JCL can now be translated to MVS JCL; this development can help IT admins curtail the use of other scheduling solutions, if not get rid of them entirely, Clerity says. Likewise, UniKix’s built-in capabilities supersede those of mainframe utilities such as OMEGAMON, which may let your staff reduce the number of apps in the environment. Version 11.2 also addresses the abilities of the software’s core functionality, of course. UniKix can run rehosted batch or online workloads with native 64-bit performance, the company says. Also new is support for sync level 2 transmissions over SNA channels. UniKix is well-known for its remarkable compatibility with CICS and batch processing environments, Clerity says, and it continually gets better as the company’s developers incorporate tweaks based on real-world input from its customers.



Clerity UniKix 11.2
Migrates and hosts legacy data and apps on open systems.



IT-Based Health Savings Could Save Billions

New IT-based technology initiatives could save billions of dollars, according to a new report by the Commission on U.S. Federal Leadership in Health and Medicine. The report discusses how the adoption of electronic health records and other technologies could impact the public healthcare infrastructure. According to the report, some \$261 billion could be saved over the next 10 years. Currently, though, widespread implementation of such technological advances as EHRs (electronic health records) is lagging. Only about 20% of physicians and 8 to 10% of hospitals have adopted EHRs.

E-Medical Records Rank As Important

Of the 178 hospital CIOs, IT directors, and IT managers responding to a recent survey by NewGrowth Consulting, only 25% listed e-medical records as one of the most important initiatives for their hospitals over the next two years. However, respondents regularly listed e-medical records and electronic ordering systems as one of the top priorities for their hospitals. About 58% say EMR systems are the most important IT project, followed by computerized physician order entry at 56%. Security initiatives ranked third at 47%, while database initiatives ranked fourth at 42%.

New Wireless Networking Standard In The Works

The Wi-Fi Alliance and the Wireless Gigabit Alliance have joined forces to create a multi-gigabit wireless networking standard for the 60GHz frequency range. The groups indicate that the 60GHz band will complement existing Wi-Fi technology because it will be targeted at applications requiring gigabit speeds for high performance. The new devices will also support traditional Wi-Fi found on the 2.4GHz and 5GHz spectrums. Also known as WiGig, the 60GHz frequency will provide transfer rates at gigabit speeds rather than the traditional megabit wireless speeds. The two alliances expect that there will be a new class of tri-band devices that will support the 2.4GHz, 5GHz, and 60GHz spectrums.

ITC Investigates Apple Claims Against Kodak

The International Trade Commission will look into a patent infringement claim leveled against Eastman Kodak by Apple. Apple claims that Kodak infringed upon its patents on some digital imaging and memory technologies in several Kodak devices, including some of its cameras and digital camcorders. Apple is seeking a ban on the import of Kodak products into the United States. Previously, Kodak filed its own complaint alleging that Apple and Research In Motion violated some of its patents, including those for photo software. Kodak leases its technology to some phone makers, but Apple and RIM reportedly wouldn't agree to lease terms.

CLIENTS

HOW TO Plan & Prepare For An Enterprise-Wide Software Update

Intentional Planning & Continuous Monitoring Are Needed

by John Brandon

UPGRADING ONE LAPTOP with new software is fairly trivial for most enterprises. If an end user needs a new capability or help in resolving a complex business problem, it's a one-on-one project. It's also an easy process to plan, as long as you know when the user is available, when the software will become available, and when you will perform the upgrade.

However, with an enterprise-wide software deployment, especially one that is related to a critical business process, planning takes on a whole new meaning. The preparation process is more like a labyrinth, and it can be difficult to even know where to start. Fortunately, a few critical steps can help you plan and prepare for a successful rollout—one that helps your enterprise (and your employees) be more productive with a given technology advancement.

Project Scope

When it comes to a new software deployment, you need to know its scope. This one word is often what separates a smooth rollout from one that causes many hours of frustration. Determining the scope of the deployment is critical enough that it should be the primary phase, not the actual deployment. Scope implies knowing the assets you will update, how business processes will change, and the implications of that new process.

Chip Bates, director of product development at ConverterTechnology (www.convertertechnology.com), says any analysis of scope should start with the users and whether user systems can be updated all at once or incrementally. For a software update such as Microsoft Word, he says it's important to also look at the implications of the rollout as it relates to user groups, determining whether documents for every user will be updated to the new version or if it will be a more gradual process.

Part of understanding the scope also implies knowing which assets you have in the company and their current versioning, says Jeff Kugler, solutions consultant with IFS North America (www.ifsworld.com/us). "When it comes to enterprise applications, I think the scope of the project depends on how old and out-of-date your version of the software is," he says. "The further behind you are in versions, the more complex and expensive the upgrade will be. That is an important thing to understand going in and ought to make people see the wisdom in staying current on versions."

Planning Steps

After determining the scope of a project, including knowing the affected user base and identifying which versions are currently installed, the next step in

Key Points

- Know the scope of the rollout, especially in terms of the user needs and what versions you are running currently.
- Potential costs include the update itself, related data conversion, and new training for employees.
- There are specific tools available that can make the update run smoothly and help with communication with employees.

planning for a software update has to do with risk assessment. Kugler says an enterprise should ask some hard questions about whether a new update will impact the business in ways that are not actually worth the update or would require more planning and preparation than anyone first thought. For example, he says a vendor might insist that a new word processing upgrade will not change how a document management system runs. In another case, he has seen vendors downplay the planning required for environmental tracking systems. Good preparation might mean updating legacy systems or backing up operations so they work well with the new update.

Bates says that companies should also analyze whether updates will be compatible with their other applications, including those that are also in need of an eventual upgrade.

Costs For Rollouts

Planning for a new software update is just a matter of understanding the scope and analyzing company assets. It can mean budgeting for unforeseen expenses that could arise. Alese Stroud, a consultant with The Stroud Group Consulting, says predicting costs related to an enterprise-wide software update will involve a serious examination of current capabilities.

"The costs will include acquisition of the new software, staffing for the project, software tools needed to manage and report on the job, software tools needed to perform the conversion and upgrade, training and documentation costs, [and] potentially associated marketing or customer communication costs in some form," says Stroud. "There is

always the hidden cost of making errors [in the rollout]."

Some of the soft costs involved have to do with employee acceptance of the new update.

"Training is another cost that often gets nixed from the budget, but what doesn't get captured is the effect on user productivity and morale when ill-trained users began using the upgraded software," says Bates. "There is really not a great way to organizationally capture the impact of self-learning, as workers will just put in longer hours to make up the difference. However, if the learning delta is too large, then users will push back heavily and the ultimate success of the project will be at risk."

Tools To Help You Plan

Several tools are available to aid in the planning process. For example, you might use a document conversion program that finds all documents on networks and converts them to the updated software version before you actually deploy the update. That way, the business will run smoothly as soon as the update comes and can continue working as normal. With this planning step, it's important to know exactly when you will update the data and follow that process quickly with the software rollout.

Marcus Yoder, senior manager with Kalypso (www.kalypso.com), says some of the tools related to a company-wide software update have a social networking flavor. For example, you can set up a central repository for all documents related to the rollout, create wikis and internal blogs, and even set up an SMS messaging system to communicate with the users in a more direct fashion.

The more you communicate about the software update prior to implementation, the more users will know what to expect and will understand the implications, benefits, and potential pitfalls, which include new licensing requirements, hardware incompatibilities that relate to the software version, and new bandwidth requirements for the network to meet potential demand or new capabilities. However, in the end, the update will in turn provide benefits to the organization, as long as the plan makes them crystal clear. ■

TOP TIPS

- | | | |
|---|--|---|
| <ul style="list-style-type: none">• When determining scope, look at the current assets, the way the software update will impact processes, and the implications for end users when you establish a new process.• It's important to consider training costs. The best | <p>advice here: Include training as part of the overall cost of the new software update and not as an ancillary endeavor.</p> <ul style="list-style-type: none">• Use tools such as social networking portals and document repositories to help managers communicate | <p>with end users and with each other.</p> <ul style="list-style-type: none">• With any software update, focus on the new advantages, such as a requirement for fewer management resources because the new software is easier to use. |
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Mobilizing The Enterprise

Provide Mobile Access To Enterprise Applications

by Sue Hildreth

AS SMARTPHONES and other mobile devices become standard work tools for traveling and remote employees, IT departments at even small organizations are having to grapple with how to provide mobile access to enterprise applications. So far, the most common activities of mobile employees have been email and calendaring, but that’s being quickly followed by such enterprise applications as sales, customer support, marketing, finance, and other lines of business applications, according to mobile consultants and analysts.

“We’re seeing new types of applications working their way into the organization, driven by line-of-business requirements,” says Michele Pelino, principal analyst at Forrester Research. According to IDC, smartphones accounted for 18.8% of all mobile phones shipped in the first quarter of 2010, up from 14.4% in first quarter 2009.

For the most part, providing mobile access is a good thing for companies to do—it lets employees access needed data from the road and respond more quickly to co-workers and customers. But mobile devices also come with concerns, including the need to ensure security for company data, the problem of how to support different devices and their incompatible platforms, who has to pay for the devices and replace them if lost, and how to give multiple smartphones with different operating systems access to large, sometimes proprietary or customized enterprise applications. Providing mobile access to enterprise apps may also require the addition of 3G network capabilities or Wi-Fi.

Those are some of the issues that Michael Finneran, president of dBrn Associates (www.dbrnassociates.com), a wireless consulting company, has to consider when he meets with a new client that is intent on adding mobile access.

“There’s a whole bunch of things we look at, and it starts with the basic questions—who’s mobile, where are they going, what does [the mobile device] have to do when they get there? That’s the framework I start with—what types of positions are mobile, [and] where are these people going—is it on-campus, offsite, or international? International data services are expensive. Then, what do the people want to do—data entry, looking up email or contacts, recording a transaction?” says Finneran.

Here are some key guidelines for mobilizing enterprise applications.

Plan For Multiple Modes Of Mobility

As Finneran notes, different users may need to access the company systems from various locations on different types of devices. A laptop user can make use of a cable connection and browser interface. A

Key Points

- Take an inventory of what types of access users need and which systems they’ll be accessing.
- Plan to provide more than one type of mobile access, including Wi-Fi, landline, and cell phone.
- Standardize on two or three mobile device platforms.

cell phone probably won’t be able to make use of a browser, and, unless it’s doing basic email, it will need a specifically designed client for each application, meaning that the organization must either develop a client-side application for the devices, get one from the vendor of the enterprise application, or find a third-party vendor that makes interfaces. For some users and applications, online access may not even be needed; simply being able to synchronize the mobile data with the home application is enough, says Jack Gold, head of research and consulting firm J.Gold Associates.

In fact, most users will need some type of offline capability, so they can work on their devices when on airplanes or other places where online access is limited. That will require a client application capable of caching data. “If you can’t get a connection and don’t have an application you can run locally, then you can’t get any work done,” says Gold.

So start with an inventory of what types of access users need, which systems they’ll be accessing, and what backup access methods will work best if the primary channel is unavailable for some reason.

Consider SaaS Solutions

Most providers of hosted, or cloud-sourced, applications provide ready-made clients for remote devices in addition to the desktop or laptop. That’s particularly true in the sales and CRM space. SaaS providers also take on the burden of maintaining the network, securing the applications, and updating the client software. So it may be worthwhile to consider moving to a hosted version of the application that is to be “mobilized.” As Gold points out, developing your own mobile interface and middleware to enterprise systems is no small undertaking.

“One of the biggest challenges is taking an existing application and mobilizing it. It’s not just about writing some code. It requires an understanding of many issues, such as bandwidth needs. For instance, many organizations don’t have 3G yet. You don’t want to design an application that exposes data and costs the company a couple million dollars because it wasn’t HIPAA or [Sarbox] compliant.”

Assess Security Requirements

Smartphones have different levels of security, so depending on how sensitive the information that employees will be accessing and downloading is, some models may not be appropriate. Some, for instance, have encryption built in, while others don’t but can support it as an addition, and some don’t support encryption at all.

Unless an organization is using a hosted SaaS provider for its remote access, it will also need to evaluate the security status of its internal systems and network. Small companies in particular can be lax about security when opening up the network to remote workers, says Anthony Fuller, the CEO of Mobile IT (www.mobileit-usa.com) which provides managed services to SMEs.

“Often when we come into a company, we find everything opened up, with files shared out for everyone to get to, the laptops don’t have critical [security] updates, and the antivirus software may be of a lower grade,” says Fuller.

Limit Support For Personal Devices

Although you may not be able to control what handhelds your colleagues bring to work, you can establish a clear policy as to which devices the company will support for access to work applications (and which it

won’t). It’s also possible to limit device support based on job function and applications to be accessed. That helps to cut down on support issues and has the added benefit of allowing IT to purchase or develop fewer client interfaces for its enterprise applications. In some cases, the company may want to forbid usage of some devices. For example, smartphones that don’t and can’t support encryption shouldn’t be used by employees who access sensitive data, especially if it’s covered by federal regulations.

If the organization has the budget to provide employees with laptops or smartphones, rather than relying on the employees’ personal devices, then it can more easily standardize on one or two devices and maintain control over the security and maintenance of the devices. When selecting the hardware, line-of-business users should provide input but shouldn’t have the final say. The company’s budget and IT resources should be factored in as well as the security capabilities and middleware available to provide back-end access to specific apps.

Keep Client Applications Simple

Although it’s possible to cram many features into a mobile application, too many features can make the application overly complex for the user, says Pelino.

“One downfall is when people try to do too much with the applications for smartphones. I’ve heard multiple examples of companies that say they’ve developed the brightest application for their marketing team, or HR team, or whatever, and they don’t understand why nobody is using it,” she says. “They didn’t keep in mind the needs of the end users.”

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IDC Sales Data On Handhelds

Users increasingly expect to use their smartphones as well as their laptops to access the company network. But which device should you support? According to IT research and analysis firm IDC, these are the top three most popular makers of smart devices.

Company	Units Shipped (In Millions)	Share Of Market As Of Q1 2010
Nokia	21.5	39.3%
Research In Motion	10.6	19.4%
Apple	8.8	16.1%

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Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Rod Scher

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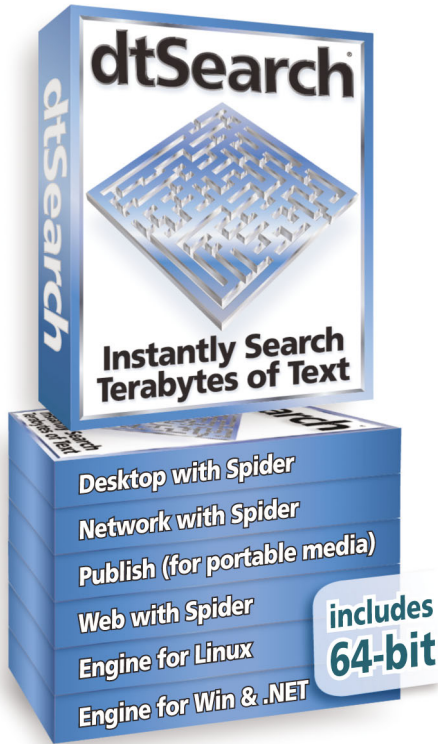
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AMERICAN PORTWELL TECHNOLOGY CAD-0205 NEW PRODUCT

by Marty Sems

Mighty Mite For A Range Of Security Roles

A LITTLE BIT OF space and a little bit of power can pay big dividends, according to American Portwell Technology. The new CAD-0205 desktop network appliance, an ultra low-voltage model, gives small and medium-sized enterprises a surprising amount of flexibility in a less than 30-watt package with a mere 7.5 x 5.9 x 1.65-inch footprint.



American Portwell Technology CAD-0205
Compact and versatile security appliance with an Intel Atom processor.

"With the latest Intel Atom processor N450 (1.66GHz with 512KB of cache), Portwell designs the CAD-0205 smaller than previous products," says Product Marketing Manager Mark Huang. "It is a power-saving solution . . . [that] can reduce electricity costs and provide great performance per watt."

SMEs can set up the CAD-0205 in a number of roles, including as a security platform compliant with HIPAA,

Sarbanes-Oxley, and PCI DSS. It's equally at home providing UTM protection (including firewall and anti-malware functions) to the network as it is at filtering content and detecting and preventing intrusion attempts. The appliance is also suitable for rear echelon duty monitoring the network, routing packets, handling secure VPN communications, balancing loads, streaming files, and applying QoS rules to traffic.

The REACH- and RoHS-compliant unit is also available with a dual-core Atom D510 with a 1.66GHz clock speed and 1MB of cache as well as with a single-core Atom D410 running at the same speed but with half the cache. The CAD-0205 has a Mini PCIe slot, which opens up interesting possibilities involving 3G, 4G, or Wi-Fi connectivity through add-in adapter cards.

With support for a 2.5-inch SATA HDD or SSD and CF, the compact CAD-0205 can scale up to 2GB of RAM. Connection-wise, it supports a quartet of Gigabit Ethernet ports, an RS-232 RJ-45 console jack, two USB ports, a VGA output, and dual bypass segment pairs. The wall- or rack-mountable CAD-0205 has an IA-64 architecture, and IT staff can customize the device's front panel.



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SIX QUICK TIPS

iSuppli Releases Q1 Smartphone Market Share Report

Research In Motion and Apple were the only two manufacturers that saw an increase in smartphone shipments from Q4 2009 to Q1 2010, according to new smartphone market share information from research firm iSuppli. RIM and Apple now hold the fifth and sixth places in the top 10 rankings, respectively, up from eighth and ninth places in the previous quarter; RIM holds 3.6% of the market, and Apple has 3%. The top four slots are held by Nokia, which maintained its lead with 37.4% of the market; Samsung, with 22.9%; LG, with 9.4%; and Sony Ericsson, with 3.6%.

Microsoft Settles Patent Dispute With VirnetX

Microsoft says it will dole out \$200 million to VirnetX Holding to finalize a patent case. VirnetX, an Internet software company, originally filed suit against Microsoft for infringing on its VPN technology, claiming that Microsoft was using the technology without paying for it. VirnetX won its first case against the computer giant in March when it claimed Microsoft was violating patents in Windows Server 2003, XP, Vista, Live Communications Server, Windows Messenger, Office Communicator, and different versions of Office.



HP Sees Growth In Q2 Revenue

Computer maker HP pulled in strong second-quarter numbers with a net revenue of \$30.8 billion—a 13% increase compared to a year earlier. Specifically, HP saw revenue increase in the Enterprise Systems and Storage group, Personal Systems group, and Financial Services business. The company’s earnings topped out at \$2.2 billion, or 91 cents per share. Projections for future quarters are positive because of the acquisitions of 3Com and Palm. HP expects to see revenue between \$29.7 billion to \$30 billion in its third quarter. For its full fiscal year, HP anticipates it will grow by 8% overall.

Consulting Firm Adds To India-Based Staff

Because of an improved business climate, 4,000 staff members will be added to the Indian staff of Capgemini, a major management consulting, outsourcing, and professional services firm worldwide, with more staff to be added in the future. This is according to Cyprian D’Souza, chief people officer at Capgemini India. The company currently employs 23,353 individuals in India, with 91,792 employees worldwide. India follows the “rightshore” delivery model, giving customers a choice of delivery locations. In reports earlier this month, Capgemini had revenue of \$2.76 billion for the first quarter, somewhat higher than fourth quarter 2009.



Data Center Etiquette

Safeguard The Server Room With The Right Do’s & Don’ts

by Bruce Gain

. . .

ALL IT TAKES is one spilled drink to short out a circuit on a server rack or a layer of contaminant buildup from workers’ shoes to cause components to overheat. Both scenarios can bring about equipment shut-downs and even data loss. Given the magnitude of risk that human behavior poses to the data center, anyone who sets foot in the enterprise’s IT center must follow and understand its rules and policies.

Here are some tips relating to data center etiquette. Certain best practices covered here might seem to err on the over-cautious side, but they actually make a lot of sense when balanced against the potential disasters they help to prevent.

Nail Down The Access Policy

The first line of defense is making sure that anybody who enters the data center signs in and wears a badge, while visitors must also have an escort, says Brad

sponsor has preregistered you ahead of time as a visitor,” Kowal says. “You often have value-added resellers and vendors taking care of equipment on the floor, but they have to prove who they are by showing some kind of credentials.”

Don’t Allow Photography

Someone taking a picture in the data center might seem harmless enough, but a seemingly innocent photo can cause a lot of damage to both the data center and the enterprise. Someone could enter the data center illicitly by getting a guest badge by using a false ID and then take pictures to get a “lay of the land” in order to later sabotage the business, Kowal says.

Although not all small to medium-sized enterprises have a no-picture-taking policy in place, the use of cameras is, at the very least, something to pay attention to, Kowal says. “If allowed, you need to know exactly why someone is taking pictures, and they better have a good enough answer,” Kowal says.

Ban Food & Drinks

Eating daily three-course meals might not always be appropriate at your desk, but it is usually OK to at least eat a snack and sip a drink while you work. However, data center workers cannot have such a luxury when inside the server room.

“Clearly, liquids represent the highest potential for risk of shorting critical computer components. Also, the corrosive nature of most drinks could cause long-term nightmares for electronics that are very hard to diagnose due to the fact that the onset of the corrosion is gradual, so the problem would be intermittent and would drive the support team crazy,” says Haim Sternberg, president and owner of Cherry Systems (www.cherrysystems.com). “Small and loose solid food like chips or, worse, small candy like M&Ms have a

“Clearly, liquids represent the highest potential for risk of shorting critical computer components.”

-Cherry Systems’ Haim Sternberg

Kowal, assistant data center director for Shands HealthCare in Florida.

In enterprises without a data center sign-in procedure, people can show up who look like they are workers, but it is not apparent who they are or what company they represent. The issue can be especially problematic if there is a security breach and there is no sign-in sheet that shows exactly who was in the data center during a specific time period. “The operator has to know who enters the data center at all times. If you are not an employee, then you are not getting on the floor unless a

BONUS TIPS

■ **Don’t pack or unpack in the data center.** All packing and unpacking of equipment should be done outside of the data center. “Corrugated cardboard boxes or wooden skids shed fibers when moved or handled,” says Kevin Vickery, president of ProSource Mission Critical Services (www.team-prosource.com). “Evidence of this is indicated by the prevalence of the materials in samples obtained from sub-floor deposits. Stored items are not only contamination sources,

but their handling in the computer room controlled areas can agitate settled contamination already in the room.”

■ **Ban cell phones.** Cell phones should not be allowed in the data center for several reasons. Besides the problems associated with taking pictures using a phone’s onboard camera, a smartphone can easily be connected to servers with a USB cable, thus posing security risks, and phones’ electromagnetic interference

can cause problems, as well, says Haim Sternberg, president of Cherry Systems (www.cherrysystems.com). “Many cell phones have internal storage, like a flash card. The risk is that with a USB cable, one can copy all kinds of data to the phone and take it out of the server room without detection,” he says. “EMI is much less of a problem nowadays, but it is not completely safe and can potentially create some unexpected problem in the server rooms.”

Best Tip:

Lead By Example

Loose cables or unused boxes, equipment left lying on the floor, or smudge marks from dirty shoes reflect sloppy enforcement of procedures, besides creating potential data center hazards. It is thus crucial to enforce and constantly show by example that a cleanliness policy and etiquette are strictly enforced at your data center.

“Maintaining a fairly high level of cleanliness will raise the level of occupant awareness with respect to special requirements and restrictions while in the data center,” says Kevin Vickery, president of ProSource Mission Critical Services (www.team-prosource.com). “Occupants or visitors to the data center will hold the controlled environment in high regard and are more likely to act appropriately.”

Most Practical Tip:

Take Care When Moving Equipment

Replacing equipment and components is a common practice in data centers—but it is also a potential source of mishaps, as well. Equipment being carried in or out can get dropped and also damage other equipment. According to Haim Sternberg, president and owner of Cherry Systems (www.cherrysystems.com), the remedy is to mandate the use of wheeled trays when transporting equipment or components inside the data center. “A wheeled tray provides for a safe and secure platform to bring in spare parts and swap the bad ones,” Sternberg says.

tendency to fall and roll into unlikely places and then sit there like a time bomb.” Given the importance of banning food and drinks, it is a good idea to communicate the policy through more than one outlet. “I like to put a little table next to the door with a sign saying ‘no food or drink in the data center,’” says John Matzek, CEO of Logic IT Consulting (www.logicitc.com). “If administrators must sign a form to gain access, include the policy on drinks and food.”

Reduce Shoe Contaminants

Shoes serve as magnets for dust and filth that can eventually make their way into the data center. If precautions are not taken, particulates from footwear can represent a major contaminant risk, potentially leading to the breakdown of servers and other equipment. “It’s all about dirt and dust,” Kowal says. “Especially when you are dealing with a pressurized floor, all that stuff from shoes will get blown up into [the server racks and infrastructure].” Although adhering to the standards of a clean room environment as much as possible is ideal, is it necessary to cover shoes with antistatic “booties” to be worn inside the data center? Not necessarily, although wearing feet coverings or booties in the data center is a common practice among Fortune 500 companies. However, mandating that anyone who enters the server room first stand on a sticky, flypaper-like mat before entering the data center can go a long way to remove shoe contaminants, Kowal says. “It really pulls all of the junk from your feet,” he says. ■

HOW TO Implement An IT Chargeback Program

Consider The Benefits & Pitfalls Before Moving Forward

by John Brandon

IN THE MODERN DATA CENTER, controlling costs requires a keen financial understanding. For some managers, this means planning server loads and network bandwidth costs, leveraging services such as storage and phone across the enterprise, expertly forecasting the needs of the business, and watching technology trends and purchasing only at optimal times.

Key Points

- Before implementation, examine business needs and decide how IT can continue to provide services in a chargeback model.
- You should also determine all of the variables for chargebacks, including server cooling and rack usage.
- When evaluating your needs, use accounting programs to track chargebacks for labor and expenses.

Some companies have moved to an IT chargeback model to address the financial concerns of running a data center, where IT charges each business unit for the services they use. In some cases, this endeavor is quite complex, especially when you consider server utilization in a virtualized environment. Fortunately, a few key steps can help you implement this model and resolve some chargeback chores.

Implementation: Where To Start

William Gutches, vice president of operations for Smithbridge Consulting, says a good first step is to evaluate the needs of the business. He advises SMEs to anticipate how the business units would benefit from a chargeback system and how the model would help the business be more effective. He also recommends asking whether business units are just seeking more control over IT processes, whether divisions are trying to determine if projects are viable, and whether IT customers in each business unit will trust IT estimates on costs before moving forward with a chargeback model.

The next most important question, says Gutches, is to determine how much it will cost to implement a chargeback program and whether the business units are willing to pay for this new process change.

Then, after determining the scope and business needs, evaluating how your company will pay for the chargeback program itself, and thinking through how the chargeback program will work in your specific environment, Gutches says the next step is evaluating software that will help with a chargeback program and help you implement the process. This

can be as simple as using a general accounting program that tracks labor and expenses by project according to each department.

“[You can use] time tracking software to collect hours spent on each project as well as the purchase order capability to track requests for spending per project,” says Gutches. “Salary and benefits information on employees [is] assigned to each project so that a cost as close to actual for each person is available for tracking. Accounting procedures will help to determine which costs can be expensed and which should be capitalized. Planning procedures will allow the decision makers to determine which proposed projects (and their associated costs and benefits) will be approved to go forward.”

Once a process is in place, IT can move ahead with a chargeback program that tracks labor, equipment, and service costs and expertly manages the amortization by business unit.

Chargeback Challenges

C. Scyphers, a consultant with Dae-mon Consulting, says one of the key hurdles to expect with IT chargeback has to do with virtualization. Suddenly, the airtight process of dividing up server workloads and projects becomes much more difficult to manage, as it is harder to determine who should pay for one physical server.

“Virtualization throws a very large wrench into [IT chargebacks] as the connection between a virtual server and its physical home is not necessarily as clear,” says Scyphers. “Almost any hypervisor offers the ability to extract the necessary data to do accurate chargeback of virtual machines. However, most of the platforms do not make this process very easy. Typically, a third-party tool or business intelligence reporting structure will need to be implemented to resolve this particular thorny issue.”

Another challenge is more of a soft-skill management issue. In a chargeback program, it may be too easy for the business units to start seeing the data center as just another utility service—one that exists solely for each business unit. This means it may become difficult to analyze technology trends, forecast services for the company, or even train staff adequately because there is no business unit willing to pay for that work.

And according to Gutches, creating a chargeback environment where none has been before—or after a failed attempt—will not be easy. “If there had been resistance or an incomplete understanding of what was needed, there could continue to be inaccuracies and resistance.”

Other Considerations

Some analysts decry the need for chargebacks because they say it devalues IT by turning it into a simple cost center

that just provides the exact services the business units need, as opposed to being a self-contained entity that also pushes the business forward into new technical directions.

Scott Archibald, an analyst with Bender Consulting, says with chargeback programs, business units often come to view IT as too much of a flat-rate service. Yet he says there are still ways to mitigate the perception that IT has now become a third-party contractor without its own business intelligence.

For starters, Archibald advises against inflating prices to pay for strategic analysis, as business units will cry foul and these expenses will be the first to be cut when setting budgets. Instead, IT should be designated as a separate cost center that has a budget for these planning endeavors.

Another pitfall to avoid is the tendency to duplicate efforts. Archibald says he has seen companies move to a chargeback model, only to see similar roles replicated in each department. For example, the business units might want to hire someone to analyze IT services or do procurement when it is smarter to have one IT group performing this function for all business units.

Archibald says another risk is that business units that come to view IT as a mere vendor inside the same company may decide to look elsewhere for services or even hire some of their own IT staff, which just duplicates efforts even more and can waste resources squired to serve the entire business.

In the end, IT chargeback can work, but it is important to plan the process, track using accounting principles, and then watch for any fallout that can occur with the chargeback program. P

TOP TIPS

- William Gutches, vice president of operations for Smithbridge Consulting, says to continue tracking the benefits of the chargeback model and be ready to move to a different model if chargebacks are not working for your organization.
- If a chargeback implementation fails, IT should be ready to evaluate why it failed and be ready with a contingency plan that does make it work effectively, Gutches adds. A project can succeed and the chargeback model can fail at the same time, which just makes it harder to analyze why the failure occurred.
- Scott Archibald, an analyst with Bender Consulting, says an ancillary idea to direct IT chargebacks is to consider aligning parts of IT with the business that may not directly sponsor that activity but has more say in those service offerings.

Federal Government Suggests Changes To Attract Young IT Workers

A recent report by the federal government's CIO council suggests that changes in workplace trends are necessary to attract and retain the next generation of workers for federal IT positions. The report, “Net Generation: Preparing for Change in the Federal Information Technology Workforce,” examined evolving trends within the federal IT workforce and found that the federal government is struggling to hold on to young workers.

“Net-Geners (those between 17 and 31 years of age) are not patiently working their way through the organizational hierarchy but are instead sampling professional opportunities and moving on quickly when they see no clear-cut advantages—personally, professionally, or financially—to staying,” the report says.

The federal government isn't the only organization lacking young workers in IT. Overall, there are fewer students graduating with IT degrees than what is required to meet the future demand, as explained by the report. The shift in trends comes at a time when 63% of current federal IT employees are at least 45 years old and are nearing retirement age.

Dave Wennergren, deputy CIO for the Department of Defense and the leader of the study, says that although this change is inevitable, engaging members of the Net Generation is possible. He explains the shift in workforce trends begins with having the right technology. “The expectation of the workforce coming to us now [is] they expect to have the kinds of tools they have in their private lives,” Wennergren says. “Now people have all manner of mobile devices at home and in their private lives that give them great connectivity and great ability to use the tools that are available today, so . . . you would expect your employer to provide you access to the kinds of tools you are used to using.”

A Call To Action

The report presented strategies for engaging members of the Net Generation, including providing tangible feedback on performance, increasing public service opportunities, giving young workers responsibility, allowing for schedule flexibility, increasing personal on-the-job coaching, and providing performance awards such as cash rewards or additional time off.

Wennergren says this alteration in workforce trends should be viewed as a call to action in order to properly adapt to the changing environment. “If we don't take advantage of this call to action, then we will miss an opportunity to make sure that we have the right workforce to meet the demands of our future,” he says.

by Amanda Bouc



Google “Mistakenly” Collects Personal Data

After having earlier admitted and defended its practice of collecting such readily broadcast data as MAC addresses, Google more recently disclosed that its Street View vehicles had also collected information about Web sites that users had visited. The information, which was collected from users running unprotected Wi-Fi networks, was never used in any Google products, according to the company. The mistake, company spokespersons say, originated in a piece of experimental software, the functionality of which was not meant to be included in the program the cars began using in 2007 to collect wireless data.

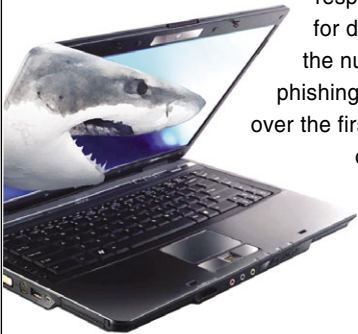


Santa Clara Approves Plans For New Yahoo! Campus

Yahoo! has received approval from city officials in Santa Clara, Calif., for plans to build a massive 46-acre campus with more than 3 million square feet of office space housing its new headquarters. Yahoo! purchased the property years ago for \$112 million. Reportedly, Yahoo! will provide Santa Clara with more than \$10 million in funds earmarked for improvements to the city, including transportation enhancements. Plans for the campus include 13 six-story office buildings and three additional buildings in which cafeterias, fitness centers, and other services will function for the 12,000 Yahoo! employees expected to work there. Yahoo! reportedly employed about 13,900 people as of December 2009. Green-related construction approaches will include locating a majority of parking spaces underground, building bike paths, and using solar panels to provide upward of 8% of the power the campus is expected to use. Groundbreaking ceremonies have yet to be announced.

Report Blames Single Gang For Most Phishing Attacks

According to new data from the APWG (Anti-Phishing Working Group), a single gang of cybercriminals is responsible for as many as two-thirds of the phishing attacks that took place in the second half of 2009. The APWG, which is a coalition of global law enforcement, government, and industrial entities formed to combat phishing-related cybercrime, says that the Eastern European gang known as Avalanche was responsible for more than 84,000 of the nearly 127,000 phishing attacks carried out in the second half of 2009, although its activity has dropped substantially—Avalanche’s attacks were down to nearly zero in April of this year, the APWG says. Still, the coalition says Avalanche is largely responsible for doubling the number of phishing attacks over the first half of 2009.



Change Review Boards: The Ears For Your Enterprise

Track Changes To Identify Risks & Reduce Downtime

by Chris A. MacKinnon

MAKING A CHANGE to an enterprise network is easy, but it’s deciding whether to make that change that’s the hard part—so hard, in fact, that some enterprises implement change review boards to better track any changes made to networks or other enterprise systems. The ultimate goal is to reduce downtime caused by human error. Review boards evaluate any change someone wants to make and look for potential problems with the change and how those changes will impact other systems.

Voice Of Reason

Barclay Rae, head of Axios Global Services (www.axiossystems.com), says the review board concept is a simple, yet solid concept. He explains, “The idea is to take control and manage business risks and priorities of proposed changes. A group of empowered and relevant people meet on a regular basis to review any planned changes, identify risks, and approve or reject the changes. [They] also review the outcome of changes and any issues.” Rae says this provides a regular forum through which all changes must be passed, thereby ensuring that the changes are not simply implemented “on a whim” by technicians.

Rae says the concept works if the right people are involved (that is, a mix of management, technical, and some business). He says the initiative must maintain momentum and should be an ongoing and vibrant forum, not a “rubber-stamping exercise.” Rae says the concept also works if all attempts to circumvent it are dealt with consistently and with levity; he says getting people on board doesn’t happen if it becomes unnecessarily inflexible or unreasonable. He notes, “There should be enough business sense in the group and its members to build in practical flexibility when needed. So, it’s a balancing act between strict rules and common sense.”

Voice Of Improvement

Kevin Parker, chief evangelist of application lifecycle management at Serena Software (www.serena.com), says enterprises often find review board meetings a “necessary evil,” and they are constantly looking for improvements to the process. He says, “Some of the issues they commonly experience include very long lists of changes (but only a handful that affect each stakeholder), and some meetings can go for long periods of time, where 90% or more of the content is not relevant to individual stakeholders. Some review boards actually do not have the ability to understand the impact of a proposed change, nor do they generate audit trails of who approved the changes.”

Parker says by bringing all the stakeholders in the business and IT together on a regular basis, a forum is created where proposed changes to the services

Key Points

- Change review boards meet regularly to review planned changes, identify risks, and approve or reject any changes. They ensure that change just doesn’t happen without good reason.
- Accountability is a driving force behind change review boards. If a production failure occurs, for example, the root cause of the failure can be determined. This process proves that there is room for improvement.
- Change review board meetings must be well-organized and should become a regular feature in the enterprise, not an afterthought.

running in production can be reviewed, the impact can be discussed, and a plan for the transition (and backout/recovery in the case of failure) can be created and shared so that everyone has the opportunity to give “go/no-go” approvals. He elaborates, “Meetings should be held weekly, biweekly, and monthly, with meetings held in person and by phone. These meetings can last for two or more hours sometimes.”

Who should be present? Parker says department heads, change management team members, data center operators, networking staff, database administrators, security staff, and business continuity and software development representatives.

Parker adds, “A few days before the meeting, a spreadsheet should be distributed listing the proposed changes that are due in the upcoming change cycles. It is each stakeholder’s responsibility to analyze the list and determine if there are issues with any of the proposed changes. At the meeting, the list should be [gone through] and commentary should be invited.” Parker says where there is need for debate, it should happen, and issues must be resolved if they can be or deferred if needed.

Voice Of Accountability

But the big question is: Are review boards really necessary? In Parker’s opinion, the board is necessary, but the meeting is not. He notes, “It is essential to have accountability when changes are being made to production systems. This is very important in the event of a production failure in order to provide a mechanism to trace back to the root

cause of the failure. This is not about assigning blame, but it is to enable process improvements and improvements to best practices so that future errors can be avoided.”

According to Parker, the most efficient and successful boards provide real-time online information that is accessible by everyone involved in requesting, approving, and deploying changes. “The best-run systems notify stakeholders of the proposed changes that affect them and require them, by a specific date and time, to approve or disapprove the proposed change,” he says. “This level of automation can eliminate the change control meeting completely and instead turn the meeting into an exception meeting where problems are solved regarding particular changes.” He says only affected stakeholders need to attend meetings.

Rae, on the other hand, believes review boards are necessary in terms of what they do but not necessarily in terms of their format and structure. But if you’re starting a review board, that’s another story, says Rae. “You have to find the right people to run the board. Ideally, this should be someone with authority and respect, plus business focus and IT understanding (to gain respect from techies but also to be able to overrule them when required). It needs to be well-organized and should quickly become a regular feature that everyone expects to happen, not something that reluctantly gets arranged late or missed.”

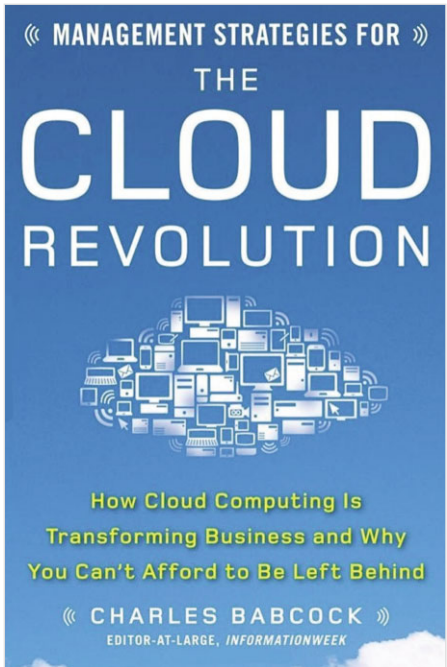
Small and midsized enterprises need to use the principles of change review boards as much as any other organization, says Rae; however, they may not need to run these with unnecessary formality, compared to larger organizations.

For organizations that are serious about managing change, Parker says, “A change review board must be created. Companies should immediately move to automation of the approval process, [and] significant benefits over the traditional meeting-based approach will be immediately achieved.” Some of these benefits, Parker says, include visibility into all upcoming changes; accountability for approvers; the ability to create release calendars and therefore manage the throughput of changes; minimal need for attendance at meetings; and auditability and traceability so that root cause analysis can be done to improve processes, practices, and policies. ■

Automating Change

When it comes to change review board accountability, electronic signatures provide an interesting psychological benefit. According to Kevin Parker, chief evangelist of application lifecycle management at Serena Software (www.serena.com), once people know their approvals and disapprovals are able to be tracked, it makes them much more circumspect about the changes they approve. Parker elaborates, “Automating the change process moves change review boards from being defensive because of their lack of clarity and visibility (and therefore a drag on the velocity of essential changes) to being an empowering and enabling part of the life cycle that improves not only the quality of the changes, but actually improves the total throughput of changes.”

BOOK REVIEW



Examining The Cloud

“Management Strategies for the Cloud Revolution: How Cloud Computing Is Transforming Business and Why You Can’t Afford to Be Left Behind”

Author: Charles Babcock
Publisher: McGraw-Hill
Price: \$27.95
Format: Hardcover, 272 pages

by Kurt Marko

• • •

CLOUD COMPUTING has dominated the headlines of product announcements, analyst reports, and industry conferences. The next wave in the cloud zeitgeist is now upon us with a spate of new books hitting the market. Given the rapid pace of change, these will undoubtedly be hopelessly obsolete in a couple years, but they do provide a vehicle for knitting the elements of cloud computing into a coherent motif.

In “Management Strategies for the Cloud Revolution,” Charles Babcock attempts to summarize the buzz for business managers and executives who aren’t steeped in the IT world’s news cycle.

Meant as a primer, the book provides a sweeping overview of the various cloud service models, their business benefits, and the cloud’s ramifications on business strategies and IT architectures. Babcock admits that at this nascent stage of development, it’s difficult to explain or even predict the cloud’s significance, noting, “There is a large-scale experiment underway on many fronts to determine what might be done ‘in the cloud.’”

Many Service Models

The book opens by defining terms and immediately confronts the many service models bandied about by vendors—what one expert has christened XaaS, or “everything as a service.” In rationalizing

the difficulty technologists have in communicating the concept to executives, Babcock notes, “The corporate IT staff knows the cloud when it sees it; it just can’t tell you what it is.”

Babcock then dives into the virtualization technology fundamental to cloud infrastructure, illustrating how encapsulating a slice of hardware, an OS, and application stack into a virtual appliance provides great flexibility in managing multiple diverse workloads on a vast server farm. Here the book takes something of a detour from the standard concept of cloud computing as a shared, multitenant information utility to describe so-called private clouds and the integration of public and private infrastructure into a hybrid architecture. This focus on extending cloud concepts inside the enterprise likely stems from Babcock’s view, shared by many in corporate IT, that “organizations that are openly contemplating using the public cloud will find that there is a need to keep many applications and much data in-house.” Although this may be the prevailing wisdom in conservative large corporations, it’s hardly universal.

Common Objections

The book also examines common objections to cloud computing, such as security concerns and a lack of standardization that can lead to vendor lock-in, and covers the cloud’s implications for IT organizations. As infrastructure operations are transformed to service delivery, there’s an obvious winnowing of systems administrators and accompanying ascendancy of business analysts, but Babcock also sees the cloud, like the

PC before it, as leveling the playing field between users and IT, or “a democratizing force, extending more computer resources to those whose access was formerly rationed.”

Babcock concludes by speculating about the cloud’s effect on business strategy. Overall, “Management Strategies for the Cloud Revolution” is a competent synopsis, although it’s more a descriptive overview than a proscriptive strategy guide. **P**

KEY CONCEPTS

- Cloud computing is a hot, often over-hyped concept that leaves many business executives baffled. “Management Strategies for the Cloud Revolution” provides an overview of the various cloud service models, an explanation of some enabling technologies, an outline of objections and concerns, and implications for business strategies and organizational structures.
- Written in a style that’s easily accessible and jargon-free, the book outlines how organizations can apply cloud-like technology, such as virtualization and self-provisioning, to improve the efficiency of internal infrastructure and examines ways internal, private clouds can be linked with shared, public services in a hybrid architecture.
- The book is interspersed with case studies and examples of successful uses of the cloud in a multitude of corporate and governmental settings.

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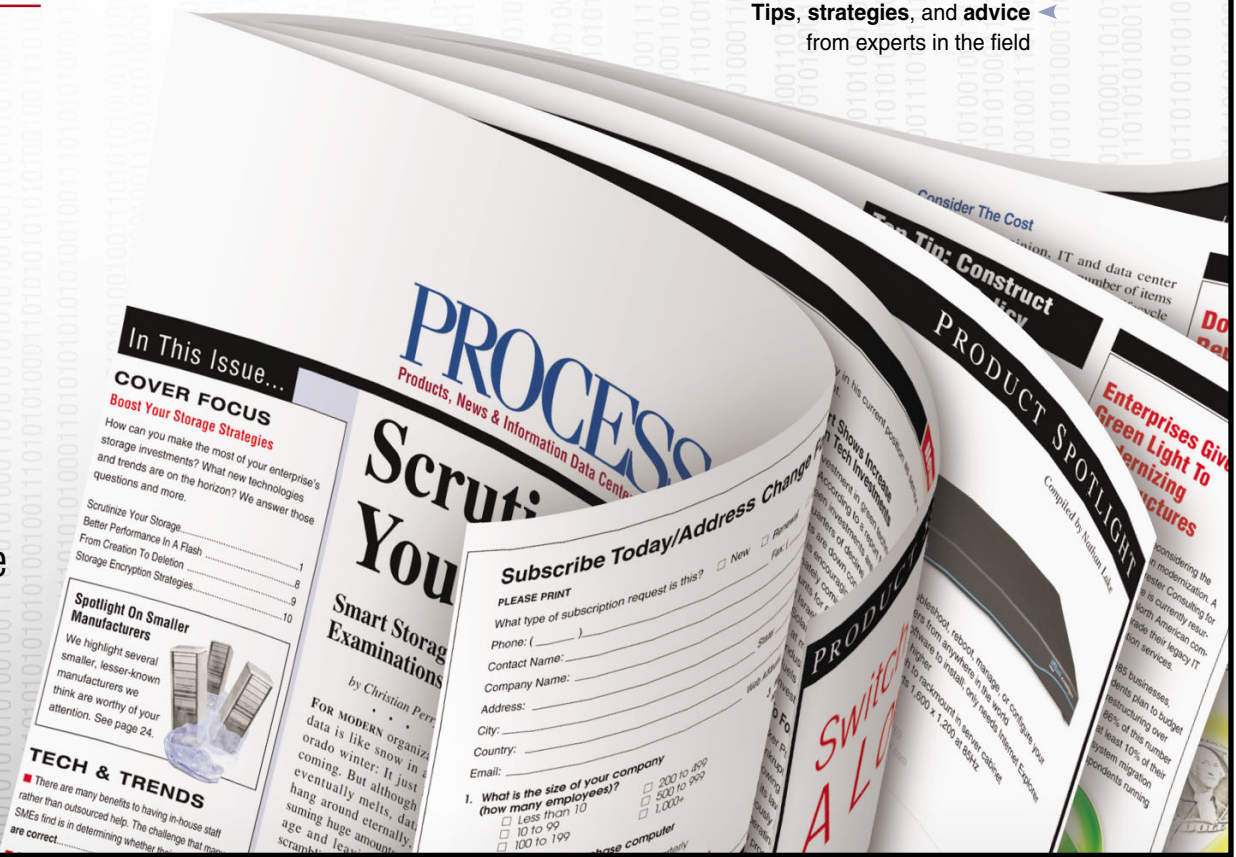
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